STIC Search Report
EIC 1700

STIC Database Tracking Number: 206261

TO: Michael Bernshteyn	From: Mei Huang
Location:	Location: EIC 1700
Art Unit : 1713	REMSEN 4B28
November 24, 2006	Phone: 571/272-3952
	Mei.huang@uspto.gov
Case Serial Number: 10/510768	

Search Notes

Examiner Bernshteyn,

Please feel free to contact me if you have any questions or if you would like to refine the search query,

Thank you for using STIC services!

Mei Huang

Access DB# 208261

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: MICHAEL BERNSHTEYN Examiner # : 81515 Date: 11/21/06
Art Unit: 1713 Phone Number 30 272-2411 Serial Number: 10/510,768
Mail Box and Bldg/Room Location: Rem. 10A34 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Resin composition for hybrid lens, method for producing

Inventors (please provide full names): Tadao Kojima, Akihiro Shimizu, Akira Komatsu

Earliest Priority Filing Date: 04/21/2003

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Please, try to find compounds according claim 2 (formulas I and II)

Thank you

M. Bern

SCIENTIFIC REFERENCE BR
Sci. & Tech. Info Cntr

NOV 22

Pat. & T M Office

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STAFF USE ONLY	Type of Search		Vendors and cost where applicable
Searcher: MGH	NA Sequence (#)		STN ✓
Searcher Phone #:	AA Sequence (#)		Dialog
Searcher Location:	Structure (#)	2-	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	(1 subset)	Dr.Link
Date Completed: 11/22/06	Litigation		Lexis/Nexis
Searcher Prep & Review Time:	Fulltext		Sequence Systems
Clerical Prep Time:	Patent Family		WWW/Internet
Online Time:	Other		Other (specify)

PTO-1590 (8-01)

Claims

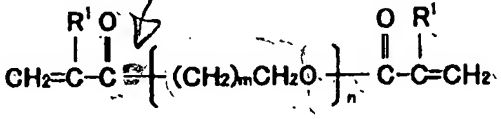
1. A resin composition for use in a hybrid lens in which the resin composition used for forming the resin layer of the hybrid lens comprising a resin layer bonded to a glass lens base material contains a radical polymerizable monomer and a silane coupling agent.

2. A resin composition for use in a hybrid lens according to claim 1, wherein the radical polymerizable monomer contains the following ingredient A and ingredient B:

Ingredient A: a di(meth)acrylate compound represented by the following general formula (I):

[Chemical formula 1]

Mike, an "O" could be missed from formula (I). "O" should be there for "di(meth)acrylate". Mei

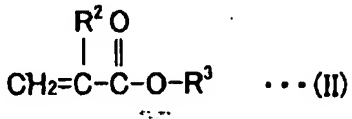


(I)

(where R^1 represents hydrogen or a methyl group, m represents an integer of 2 to 5 and n represents an integer of 1 to 16)

Ingredient B: a mono(meth)acrylate compound represented by following general formula (II):

[Chemical formula 2]



(II)

(where R^2 represents hydrogen or a methyl group and R^3 represents a cycloaliphatic hydrocarbon group with a number of carbon atoms of from 5 to 16).

3. A resin composition for use in a hybrid lens according to claim 2, wherein the radical polymerizable monomer further contains the following ingredient C:
Ingredient C: a urethanepoly(meth)acrylate having two or more (meth)acryloyloxy groups in one molecule, or an epoxypoly(meth)acrylate having two or more (meth)acryloyloxy groups in one molecule.

4. A resin composition for use in a hybrid lens according to claim 2, wherein the content of the ingredient A is from 30 to 90 parts by weight and the content of the ingredient B is from 5 to 40 parts by weight.

5. A resin composition for use in a hybrid lens according to claim 3, wherein the content of the ingredient C is from 5 to 50 parts by weight.

6. A resin composition for use in a hybrid lens according to claim 1, wherein the content of the silane coupling agent is from 1 to 10 parts by weight.

STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact*:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

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=>  fil reg
FILE 'REGISTRY' ENTERED AT 17:19:19 ON 22 NOV 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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     (FILE 'HOME' ENTERED AT 14:22:43 ON 22 NOV 2006)

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L4               STR
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L6             0 SEA SSS SAM L3
L7            25 SEA SSS SAM L4
L8               STR L3
L9               STR L4
L10              SCR 2043
L11           19 SEA SSS SAM (L8 AND L9) AND L10
L12              STR L8
L13              STR
L14           50 SEA SSS SAM (L12 OR L13) AND L9 AND L10
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L21       278500 SEA PETH/PCT
L22        56475 SEA L20 AND L21
L23           50 SEA SUB=L22 SSS SAM ((L12 OR L17) AND L9 AND L10)
L24           50 SEA SUB=L22 SSS SAM (L12 AND L9 AND L10)
L25           19 SEA SSS SAM (L8 OR L17) AND L9 AND L10
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L28            1 SEA L26 AND L27
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L30            6 SEA L29 AND 2/NC
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L35            15 SEA L33 AND L34
L36       1131650 SEA EYE? OR RETINA? OR OCULAR? OR CORNEA? OR OPHTHALM?
                   OR OPTICAL? OR OPTOM?
L37            37 SEA L33 AND L36
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L39            15 SEA L35 NOT L32
L40            31 SEA L37 NOT (L32 OR L39)



=> d l29 que stat
L8                  STR
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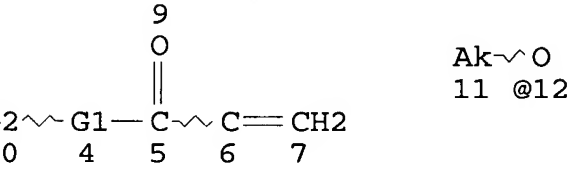


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STEREO ATTRIBUTES: NONE
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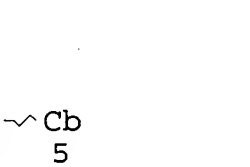


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DEFAULT MLEVEL IS ATOM
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ECOUNT IS M5-X16 C AT 5

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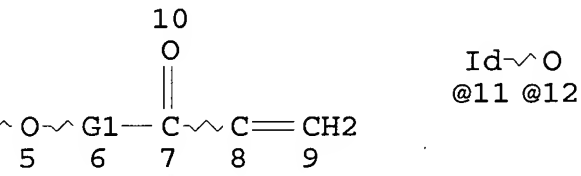
L17 STR



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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
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L21 278500 SEA FILE=REGISTRY PETH/PCT
L22 56475 SEA FILE=REGISTRY L20 AND L21
L29 166 SEA FILE=REGISTRY SUB=L22 SSS FUL ((L8 OR L17) AND L9 AND L10)

100.0% PROCESSED 17797 ITERATIONS 166 ANSWERS
SEARCH TIME: 00.00.01

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

=> d l32 cbib abs hitstr hitind 1-9

L32 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
2006:463205 Document No. 144:469309 Optical semiconductor packaging materials with good transparency, UV and heat resistance, and processability. Takebe, Tomoaki; Ota, Tsuyoshi; Obata, Yutaka; Higuchi, Hiroyuki (Idemitsu Kosan Co., Ltd., Japan). PCT Int. Appl. WO 2006051803 A1 20060518, 30 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2005-JP20509 20051109. PRIORITY: JP 2004-325000 20041109.

AB Title packaging materials useful for light-emitting elements or a light-receiving elements in optical semiconductor devices comprise a polymer obtained by radically polymerizing a methacrylate containing an C≥7 alicyclic hydrocarbon group such as an adamantyl group, a norbornyl group, or a dicyclopentanyl group. Alternatively title packaging materials comprise a polymer obtained by radically polymerizing 50-97% the alicyclic hydrocarbon group-containing methacrylate and 3-50% a hydroxyl group-containing acrylate. Thus, a composition comprising 21 g 1-adamantyl methacrylate and 0.021 g Perhexa 3M95 was poured into a cell prepared using 2 glass substrates and a spacer, heated at 100° for 1 h, 110° for 1 h, 120° for 1 h, and 130° for 30 min to give a test piece, showing glass transition temperature 200°, total light transmittance 92.8%, light transmittance at 400 nm 93.0%, flexural modulus 3100 MPa, softening point 220°, and good weather resistance.

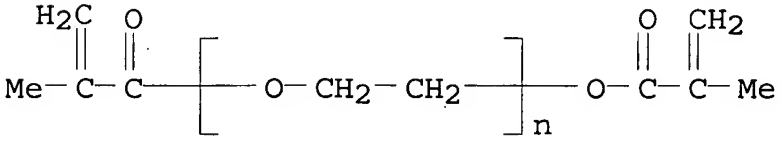
IT **886992-45-6P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(optical semiconductor packaging materials with good transparency, UV and heat resistance, and processability)

RN 886992-45-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, tricyclo[3.3.1.13,7]dec-1-yl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

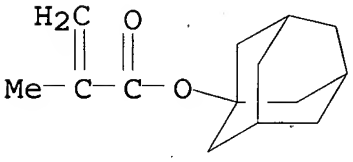
CM 1

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 2

CRN 16887-36-8
CMF C14 H20 O2



CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
IT 28854-38-8P, 1-Adamantyl methacrylate homopolymer 34755-33-4P
64114-51-8P, Isobornyl methacrylate homopolymer 128509-51-3P
154116-66-2P 886992-44-5P **886992-45-6P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(optical semiconductor packaging materials with good transparency, UV and heat resistance, and processability)

L32 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
2005:429482 Document No. 142:464511 Solvent-free ultraviolet curing resin compositions with good adhesion to polyolefins and workability for paints, inks, adhesives, sealing agents, and primers. Tamai, Toshiyuki; Watanabe, Mitsuru; Kashihara, Kenji; Masuda, Takafumi (Toyo Kasei Kogyo Company Limited, Japan; Oska Municipal Government). PCT Int. Appl. WO 2005044914 A1 20050519, 17 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,

NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2004-JP16228 20041101. PRIORITY: JP 2003-377424 20031106.

AB Title compns. comprise (A) chlorinated polyolefin with chlorine content 15-40 5-35, (B) alicyclic hydrocarbon mono(meth)acrylate 15-60, (C) polypropylene glycol di(meth)acrylate 5-80, optionally (D) aliphatic hydrocarbon di(meth)acrylate 0-1100 (based on A + B + C) and (D) polyfunctional monomer having 3-6 (meth)acryloyl groups 0-600 (based on A + B + C), and (F) photopolymn. initiator 1-15 parts (based on A + B + C + D + E). Thus, a composition comprising isobornyl acrylate 60, Blemmer ADP 400 (polypropylene glycol diacrylate) 20, chlorinated polyolefin 20, and Irgacure 651 4 parts was applied on a polypropylene film and irradiated with a UV-ray to give a test piece with good adhesion.

IT **851728-41-1P**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(blend with acrylic polyoxyalkylene; solvent-free UV curing resin compns. with good adhesion to polyolefins and workability for paints, inks, adhesives, sealing agents, and primers)

RN 851728-41-1 HCAPLUS

CN 2-Propenoic acid, cyclohexyl ester, polymer with α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

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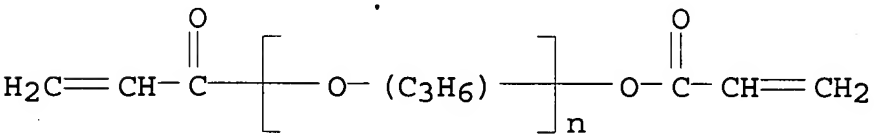
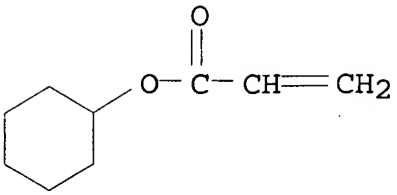
CRN 52496-08-9
CMF (C3 H6 O)n C6 H6 O3
CCI IDS, PMS



CM 2

CRN 3066-71-5
CMF C9 H14 O2



IC ICM C08L033-06
ICS C08L033-14; C08F290-06; C09D004-06; C09D005-00; C09D133-06; C09D133-14; C09J004-02; C09K003-10

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 42

IT 108-31-6DP, Maleic anhydride, reaction products with polyolefins, chlorinated 9010-79-1DP, Ethylene-propylene copolymer, chlorinated 25085-53-4DP, Isotactic polypropylene, maleated, chlorinated 851705-36-7P, 1,6-Hexanediol diacrylate-isobornyl acrylate-polypropylene glycol diacrylate-trimethylolpropane triacrylate copolymer 851705-37-8P, Dipentaerythritol hexaacrylate-1,6-hexanediol diacrylate-isobornyl acrylate-polypropylene glycol diacrylate copolymer **851728-41-1P** 851728-42-2P 851728-43-3P, Blemmer ADP 400-cyclohexyl acrylate-dipentaerythritol hexaacrylate-neopentyl glycol diacrylate copolymer 851728-44-4P, Blemmer ADP 400-cyclohexyl acrylate-neopentyl glycol diacrylate-trimethylolpropane triacrylate copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(blend with acrylic polyoxyalkylene; solvent-free UV curing resin compns. with good adhesion to polyolefins and workability for paints, inks, adhesives, sealing agents, and primers)

L32 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
2000:143303 Document No. 132:187465 Plastic rods for light transmission. Yamanaka, Tetsuo; Kawai, Hiromasa; Iwata, Shuichi (Hitachi Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000066039 A2 20000303, 5 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1998-238157 19980825.

AB The rods comprise: a core (n = n0; 5-50 mm diameter) obtained from polymerizing a liquid mixture of an aromatic methacrylate and a poly-functional methacrylate (average mol. weight > 250) with the polymerization shrinkage < 10%, where $1/x \leq V \leq 20/x$ [V = polymerization velocity (cm/min); x

= gel formation velocity (min)]; and a (fluoropolymer) cladding (n = n1 < n0).

IT **221461-53-6**, Polyethylene glycol dimethacrylate-dicyclopentanyl methacrylate copolymer
RL: DEV (Device component use); USES (Uses)
(plastic rods for light transmission)

RN 221461-53-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

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CRN 34759-34-7
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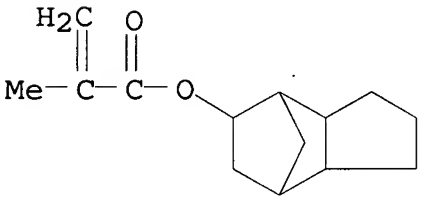
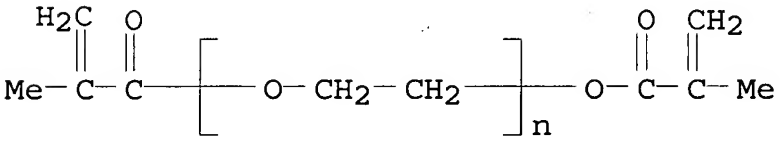


CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



IC ICM G02B006-00
ICS C08F220-10; C08F290-06; C08K005-17; C08L033-04; C08L055-00

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 116-14-3, Tetrafluoroethylene, uses **221461-53-6**, Polyethylene glycol dimethacrylate-dicyclopentanyl methacrylate copolymer

RL: DEV (Device component use); USES (Uses)
(plastic rods for light transmission)

L32 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
1999:156000 Document No. 130:253286 Heat-resistant radiation-curable acrylic polymer adhesives for optical components. Nagai, Yoshinori; Kawai, Hiromasa; Suzuki, Minoru (Hitachi Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11061081 A2 19990305 Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-230635 19970827.

AB The title adhesives are prepared from C5-22 cyclohydrocarbyl (meth)acrylates (e.g., FA-513M) 15-95, poly(C1-5 alkylene glycol) di(meth)acrylates (e.g., NK Ester 14G) 5-80, and copolymerizable vinyl monomers with b.p. >180° (e.g., NK Ester HD, 2-hydroxyethyl methacrylate, SZ 6030) 0-85% in the presence of polymerization initiators (e.g., Irgacure 651).

IT **221461-53-6**
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(adhesives; heat-resistant radiation-curable acrylic polymer adhesives for optical components)

RN 221461-53-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

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CRN 34759-34-7
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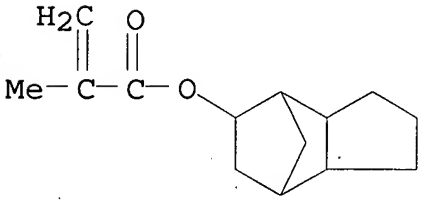

CM 2

CRN 25852-47-5
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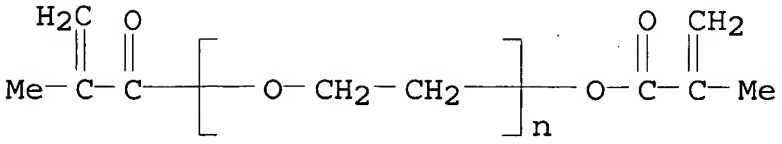
CCI PMS



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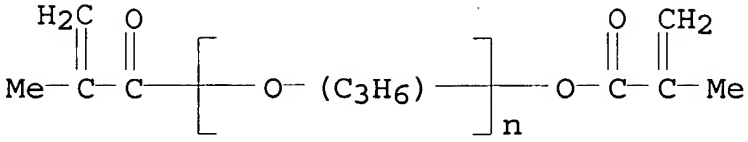
ICS C03C027-10; C08F290-06; G02B006-24; C09J004-00; G02B007-00
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73
IT 221461-51-4 **221461-53-6** 221461-55-8
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(adhesives; heat-resistant radiation-curable acrylic polymer adhesives for optical components)

L32 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
1998:498654 Document No. 129:176464 Curable transparent polymer compositions and cured products thereof with excellent weather resistance and low water absorption. Watanabe, Takashi; Hatazawa, Takenobu (Sekisui Chemical Co. Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10204132 A2 19980804 Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-12621 19970127.
AB Title compns., useful for optical materials, etc., contain (a) binder polymers H2C:CMeCO2(CHMeCH2O)m(CH2CHMeO)nOCMe:CH2 (m + n = 3-14), (b) H2C:CMeCO2R1 (R1 = C≤20 aliphatic or alicyclic hydrocarbon group, aromatic hydrocarbon group), H2C:CHCO2R1, and/or H2C:CHR2 (R2 = cyano, aromatic hydrocarbon group), and (c) polymerization initiators at b/(a + b) = (20-60)/100. Thus, a curable polymer composition containing nonapropylene glycol dimethacrylate 60, Me methacrylate 20, styrene 20, and 1-hydroxycyclohexyl Ph ketone 0.5 part was cured under UV in a 15-mm gap between glass spacers to show cure time 3 min t give a test piece showing total light transmittance 92%, water absorption 0.25% (JIS K 7209), and Rockwell hardness (M scale) 90 (JIS K 7202).
IT **211379-98-5P**, Cyclohexyl methacrylate-polypropylene glycol dimethacrylate copolymer
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(rapidly curable acrylic resin compns. giving transparent products with improved weatherability and low water absorption)
RN 211379-98-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

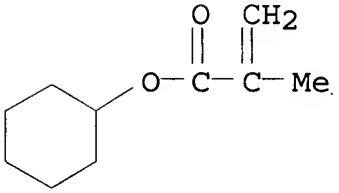
CM 1

CRN 25852-49-7
CMF (C3 H6 O)n C8 H10 O3
CCI IDS, PMS



CM 2

CRN 101-43-9
CMF C10 H16 O2



IC ICM C08F290-06
ICS G02B001-04
CC 37-6 (Plastics Manufacture and Processing)
IT 181868-72-4P, Methyl methacrylate-nonapropylene glycol dimethacrylate copolymer **211379-98-5P**, Cyclohexyl methacrylate-polypropylene glycol dimethacrylate copolymer 211379-99-6P 211380-00-6P, Cyclohexyl methacrylate-diethylene glycol ethyl ether acrylate-polypropylene glycol dimethacrylate copolymer 211380-01-7P, Methyl methacrylate-polypropylene glycol dimethacrylate-styrene copolymer 211380-02-8P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(rapidly curable acrylic resin compns. giving transparent products with improved weatherability and low water absorption)

L32 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
1995:726083 Document No. 123:183651 UV-Curable coating composition for optical recording medium. Kominami, Hiroshi; Saotome, Harumi (Sony

Chemicals, Japan). Jpn. Kokai Tokkyo Koho JP 07062267 A2 19950307 Heisei, 17 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-216272 19930831.

AB The title coating composition comprises ≥1 bifunctional (meth)acrylic monomer 70-90 parts, ≥1 ring-containing monofunctional (meth)acrylic monomer 10-30 parts, and a photopolymn. initiator. The composition can give a protection film with superior adhesion to recording film and moisture-resistance.

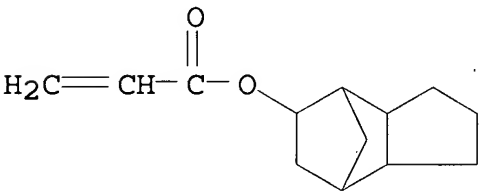
IT **166032-97-9**
RL: DEV (Device component use); USES (Uses)
(coated and cured on optical recording medium)

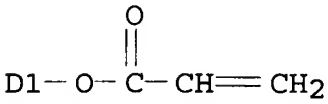
RN 166032-97-9 HCAPLUS

CN 2-Propenoic acid, octahydro-4,7-methano-1H-indene-5,?-diyl ester, polymer with α-hydro-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 91433-85-1
CMF C16 H20 O4
CCI IDS

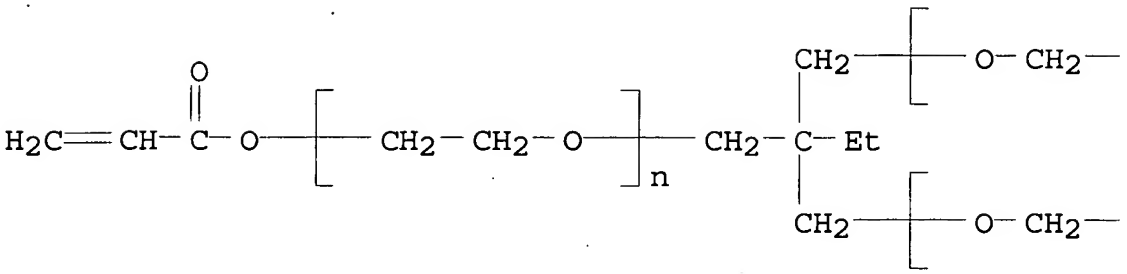




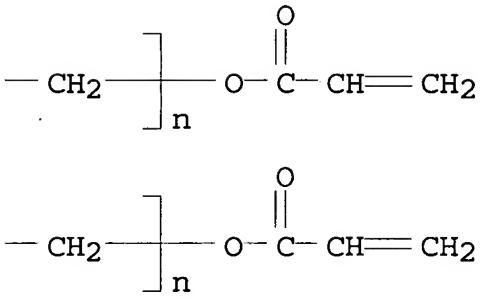
CM 2

CRN 28961-43-5
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H20 O6
CCI PMS

PAGE 1-A



PAGE 1-B



IC ICM C09D004-02
ICS G11B007-24; G11B011-10
ICA C08F002-48
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 42
IT 166032-93-5 166032-94-6 166032-95-7 166032-96-8
166032-97-9 166032-98-0 166032-99-1 167569-13-3
RL: DEV (Device component use); USES (Uses)
(coated and cured on optical recording medium)

L32 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
1993:201789 Document No. 118:201789 Optically modulating material and optical modulator. Ozawa, Tetsuo; Okabe, Noriyuki (Mitsubishi Kasei Corp., Japan). Jpn. Kokai Tokkyo Koho JP 04317025 A2 19921109 Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1991-85169 19910417.
AB The material comprises a liquid crystal and a polymer prepared by copolymn. of a polymerizable composition comprising a diacrylate compound
CH:C(R)CO2(CH2CH2O)nCOC(R):CH2 (R = H, Me; n = 1-25) and a

monoacrylate compound CH2:C(R1)CO2R2 (R1 = H, Me; R2 = C1-18 alkyl, cyclohexyl, tetrahydrofuryl) and its optical transmittance and scattering can be controlled by applying an elec. field. The modulator has the material sandwiched between transparent substrates, 1 of which is equipped with an electrode.

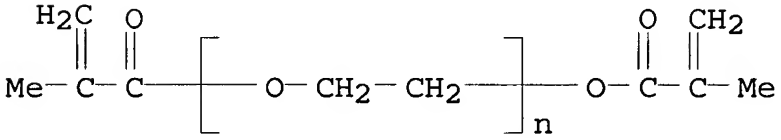
IT **121465-61-0**
RL: USES (Uses)
(optical modulating material containing)

RN 121465-61-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

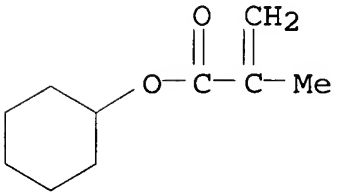
CM 1

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 2

CRN 101-43-9
CMF C10 H16 O2



IC ICM G02F001-1333
ICS C09K019-00

CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74

IT 9063-88-1 63908-45-2 108891-14-1 114296-36-5 117647-36-6

121465-61-0 147044-78-8 147044-79-9 147044-80-2
RL: USES (Uses)
(optical modulating material containing)

L32 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
1991:108203 Document No. 114:108203 Fragrance release device containing a highly adsorptive copolymer. Tangney, Kathryn R. (Dow Corning Corp., USA). U.S. US 4961532 A 19901009, 18 pp. (English). CODEN: USXXAM. APPLICATION: US 1989-376491 19890707.

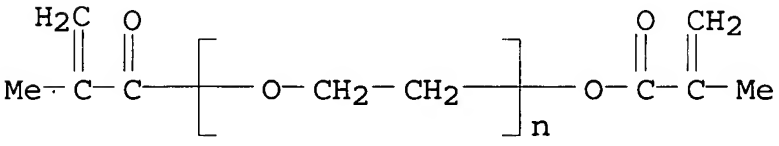
AB The fragrance controlled release device is a container having 2 chambers, one of air-impermeable and one of air-permeable material, a communication channel between the chambers, and a porous particulate carrier powder in one chamber. Inverting the device pours powder from one chamber to another, allowing fragrance release. The powder is a highly cross-linked polymethacrylate which easily adsorbs fragrances, e.g., natural fragrances and aroma chems., perfumes, or colognes. Suitable polymers are diacetone acrylamide-ethylene glycol dimethylacrylate (EGDM), substituted methacrylate-EGDM, and substituted aminomethacrylate-EGDM polymers.

IT **121465-61-0**
RL: OCCU (Occurrence)
(highly crosslinked, for controlled release of fragrances into air)

RN 121465-61-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

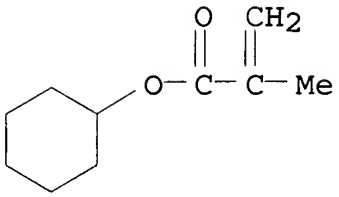
CM 1

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 2

CRN 101-43-9
CMF C10 H16 O2



IC ICM A61L009-04
INCL 239060000
CC 59-6 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 63
IT 79-41-4D, esters, polymers 9003-70-7, Styrene-divinylbenzene polymer 9057-58-3 25053-81-0, 2-Hydroxyethyl methacrylate-ethylene glycol dimethacrylate polymer 25777-71-3, Methyl methacrylate-ethylene glycol dimethacrylate polymer 26374-17-4 26658-84-4 26794-61-6, Butyl methacrylate-ethylene glycol dimethacrylate polymer 27290-36-4, Styrene-tetraethylene glycol dimethacrylate polymer 28377-02-8 57033-35-9 58374-76-8 61181-28-0 61181-29-1 69638-62-6, Cyclohexyl methacrylate-ethylene glycol dimethacrylate polymer 77745-70-1 84110-81-6, Ethylene glycol dimethacrylate-2-ethylhexylmethacrylate copolymer 111930-81-5 **121465-61-0** 131577-54-3 131577-55-4 131649-37-1 132257-72-8 132257-73-9 132257-74-0 132257-77-3 132257-78-4
RL: OCCU (Occurrence)
(highly crosslinked, for controlled release of fragrances into air)

L32 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN
1989:440641 Document No. 111:40641 Manufacture of moldings with good release. Otani, Mitsuo; Arakawa, Koji (Kyowa Gas Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 63280701 A2 19881117 Showa, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1987-117741 19870514.
AB The title moldings are manufactured by mixing 0.001-1.0 part phosphate (RO)mPO(OH)3-m (R = C8-13 alkyl, m = 1 or 2) with 100 parts methacrylate syrup [viscosity 1-1000 P at 25°] and curing with radical initiators under pressure and heat. A mixtt. of polymer syrup from 50 parts Me methacrylate and 50 parts tert-Bu methacrylate (viscosity 210 P) 100, monooctyl phosphate 0.03, and 2,2'-azobis(2,4-dimethylvaleronitrile) 0.3 part was molded under pressure for 15 min and cooled to give moldings with good release.
IT **121465-61-0**, Cyclohexyl methacrylate-polyethylene glycol dimethacrylate copolymer
RL: USES (Uses)

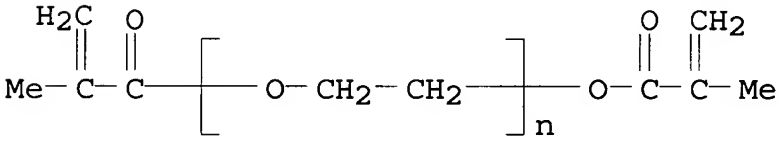
(molding of syrups, acid phosphate esters as release agents for)

RN 121465-61-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

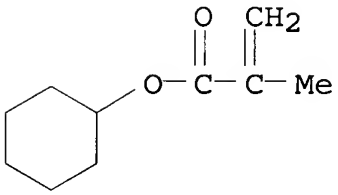
CM 1

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 2

CRN 101-43-9
CMF C10 H16 O2



IC ICM C08F002-00
ICA B29C033-56; C08F020-12; C08K005-52; C08L033-10
CC 37-6 (Plastics Manufacture and Processing)
IT 25034-86-0, Methyl methacrylate-styrene copolymer 28549-51-1, tert-Butyl methacrylate-methyl methacrylate copolymer 32554-23-7, Methyl methacrylate-phenylmaleimide copolymer 52857-82-6, Methyl methacrylate-neopentyl glycol dimethacrylate copolymer 78949-74-3, Neopentyl glycol dimethacrylate-styrene copolymer 109665-07-8, tert-Butyl methacrylate-polyethylene glycol dimethacrylate copolymer 110036-26-5, Methyl methacrylate-2,4,6-tribromophenyl methacrylate copolymer 118814-87-2, Neopentyl glycol dimethacrylate-styrene-2,4,6-tribromophenyl methacrylate copolymer **121465-61-0**, Cyclohexyl methacrylate-polyethylene glycol dimethacrylate copolymer

121465-62-1 121500-21-8, 2,4,6-Tribromophenyl methacrylate-neopentyl glycol dimethacrylate copolymer
RL: USES (Uses)
(molding of syrups, acid phosphate esters as release agents for)

=> d l39 cbib abs hitstr hitind 1-15

L39 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
2001:101207 Document No. 134:163820 Polymerizable compositions for making transparent polymer moldings, resulting polymer moldings, and use thereof in optics. Richard, Gilles; Primel, Odile; Yean, Leanirith (Essilor International Compagnie Generale D'optique, Fr.). PCT Int. Appl. WO 2001009205 A1 20010208, 37 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (French). CODEN: PIXXD2. APPLICATION: WO 2000-FR2200 20000731. PRIORITY: FR 1999-10031 19990802.

AB The invention concerns a composition comprising: 35-70 parts CH2:CR1CO2ACOCR2:CH2 [I; R1, R2 = H or CH3; A = (CH2CH2CH2O)m or (CH2CHMeO)m; m = 4-20]; 5-50 parts monomer (II) comprising ≥1 urethane or urea unit and ≥2 (meth)acrylate functions; and 5-40 parts monomer (III) with high Abbe number and comprising ≥1 methacrylate function(s) (such as tert-Bu methacrylate), the total of monomers I, II, and III representing 100 parts by weight The invention is useful for making optical and ophthalmic articles for replacement of similar articles prepared from compns. containing diethylene glycol diallyl carbonate by polymerization of mixts. of I, II, and III in a mold.

IT **325470-89-1P 325470-90-4P 325470-91-5P 325470-92-6P 325470-93-7P**
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(polymerizable compns. containing polyoxyalkylene di(meth)acrylates and urea- or urethane-containing poly(meth)acrylates for making transparent polymer moldings, for use in optics)

RN 325470-89-1 HCAPLUS

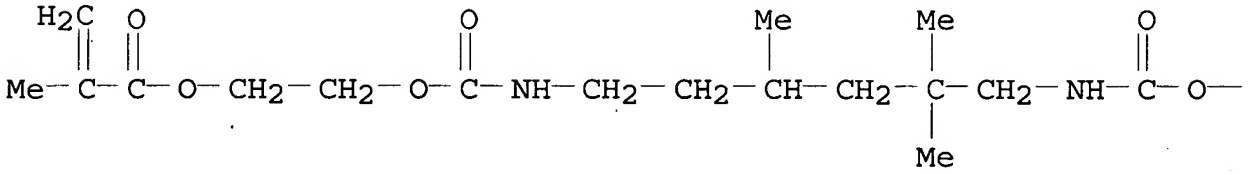
CN 11,14-Dioxa-2,9-diazaheptadec-16-enoic acid, 4,4,6,16-tetramethyl-10,15-dioxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-

propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] and octahydro-4,7-methano-1H-inden-5-yl 2-propenoate (9CI) (CA INDEX NAME)

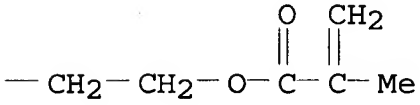
CM 1

CRN 41137-60-4
CMF C23 H38 N2 O8

PAGE 1-A

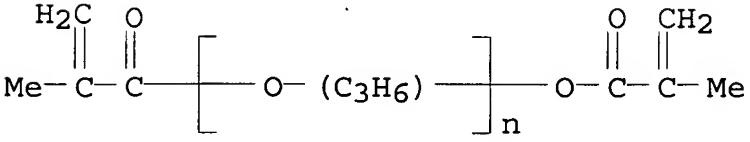


PAGE 1-B



CM 2

CRN 25852-49-7
CMF (C3 H6 O)n C8 H10 O3
CCI IDS, PMS



CM 3

CRN 7398-56-3
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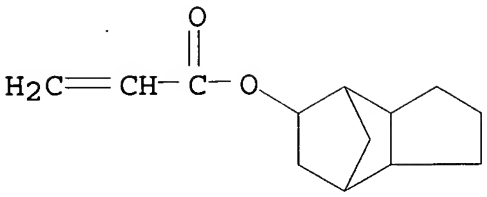
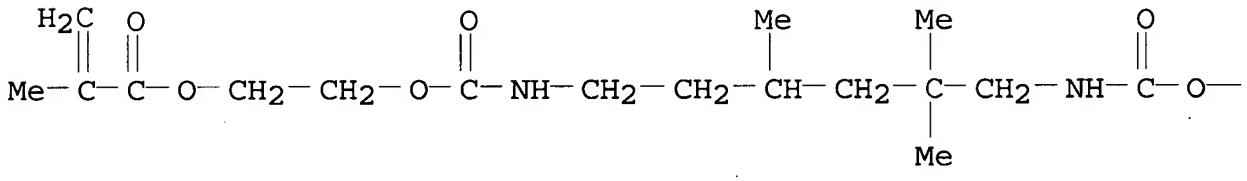


RN 325470-90-4 HCAPLUS
CN 11,14-Dioxa-2,9-diazaheptadec-16-enoic acid, 4,4,6,16-tetramethyl-10,15-dioxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

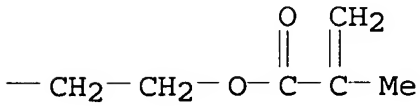
CM 1

CRN 41137-60-4
CMF C23 H38 N2 O8

PAGE 1-A

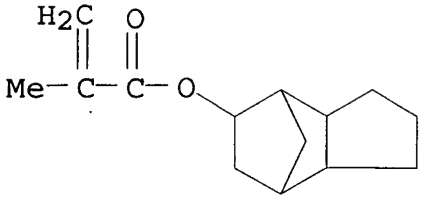


PAGE 1-B



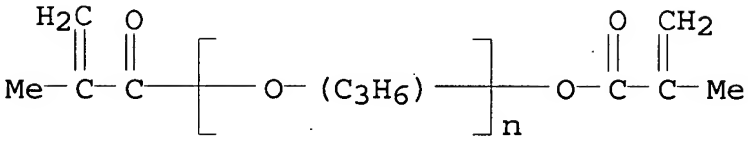
CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

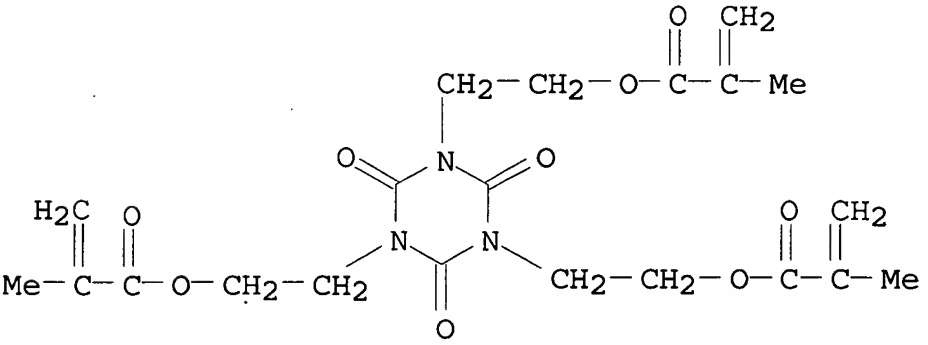
CRN 25852-49-7
CMF (C3 H6 O)n C8 H10 O3
CCI IDS, PMS



RN 325470-91-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

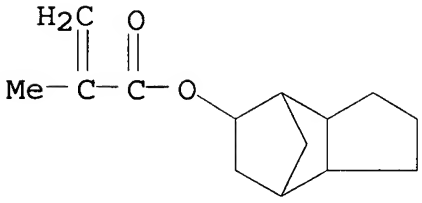
CM 1

CRN 35838-12-1
CMF C21 H27 N3 O9



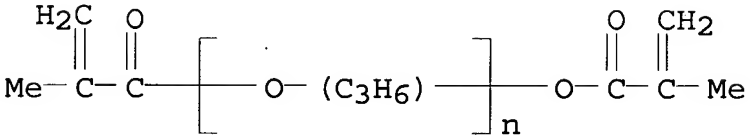
CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

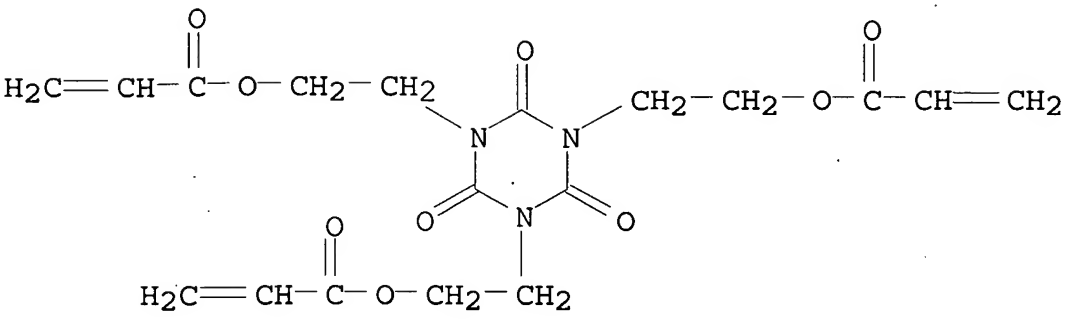
CRN 25852-49-7
CMF (C3 H6 O)n C8 H10 O3
CCI IDS, PMS



RN 325470-92-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] and (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl tri-2-propenoate (9CI) (CA INDEX NAME)

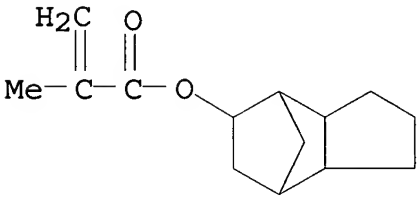
CM 1

CRN 40220-08-4
CMF C18 H21 N3 O9



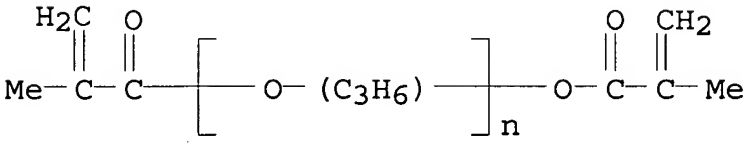
CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

CRN 25852-49-7
CMF (C3 H6 O)n C8 H10 O3
CCI IDS, PMS



RN 325470-93-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with CN 964 and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

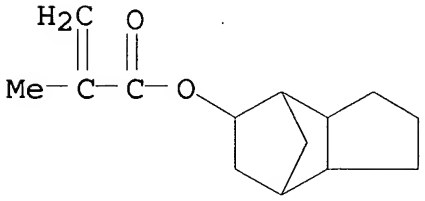
CM 1

CRN 149315-73-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

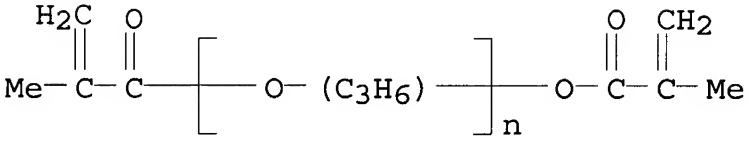
CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

CRN 25852-49-7
CMF (C3 H6 O)n C8 H10 O3
CCI IDS, PMS

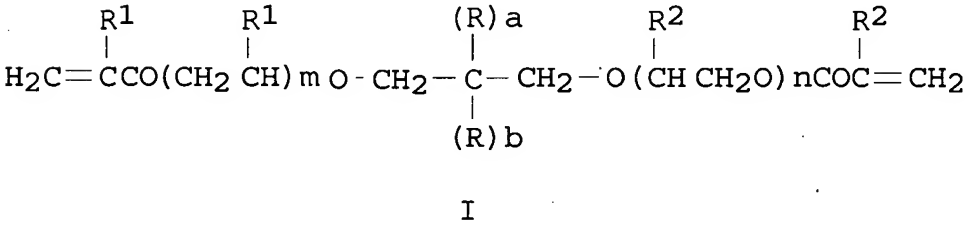


IC ICM C08F222-10
ICS G02B001-04
CC 37-3 (Plastics Manufacture and Processing)
ST polyoxyalkylene bisacrylate copolymer optical molding; tertiary butyl methacrylate copolymer optical molding; urethane methacrylate copolymer **lens** manuf
IT **Lenses**
(polymerizable compns. containing polyoxyalkylene di(meth)acrylates and urea- or urethane-containing poly(meth)acrylates for making transparent polymer moldings, for use in optics)
IT 325470-85-7P 325470-86-8P 325470-87-9P 325470-88-0P

325470-89-1P 325470-90-4P 325470-91-5P
325470-92-6P 325470-93-7P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(polymerizable compns. containing polyoxyalkylene di(meth)acrylates and urea- or urethane-containing poly(meth)acrylates for making transparent polymer moldings, for use in optics)

L39 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1999:64844 Document No. 130:139781 Polymerizable monomer compositions, transparent polymer substrates, and resulting optical and ophthalmologic articles. Widawski, Gilles; Cano, Jean-Paul; Magne, Jean-Francois (Essilor International Compagnie Generale d'Optique, Fr.). PCT Int. Appl. WO 9902574 A1 19990121, 31 pp. DESIGNATED STATES: W: AU, CA, JP, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (French). CODEN: PIXXD2. APPLICATION: WO 1998-FR1421 19980703. PRIORITY: FR 1997-8614 19970707; FR 1997-9733 19970730.

GI



I

AB The invention concerns polymerizable monomer compns., transparent polymer substrates, and resulting optical and ophthalmol. articles, comprising 30-100% monomers I in which: R1, R2, R' and R" represent, independently of one another, a hydrogen atom or a Me radical, Ra and Rb, identical or different, represent each a C1-10 alkyl group, provided that Ra and Rb do not simultaneously represent a Me group and m and n are whole nos. satisfying the relationship 2 m + n 20; 0-70% of at least another polymerizable monomer comprising one or several (meth)acrylate functions, different from I, such that a transparent substrate resulting from polymerization of the composition has a glass temperature 70-110°; and a polymerization initiation system. The invention is applicable to the manufacture of optical and ophthalmol. articles.

IT **219993-56-3P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical

or engineered material use); PREP (Preparation); USES (Uses) (polymerizable monomer compns., transparent polymer substrates, and resulting optical and ophthalmol. articles)

RN 219993-56-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-indene-5,?-diyl ester, polymer with α,α'-(2-butyl-2-ethyl-1,3-propanediyl)bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)]], CN 131 and (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl tri-2-propenoate (9CI) (CA INDEX NAME)

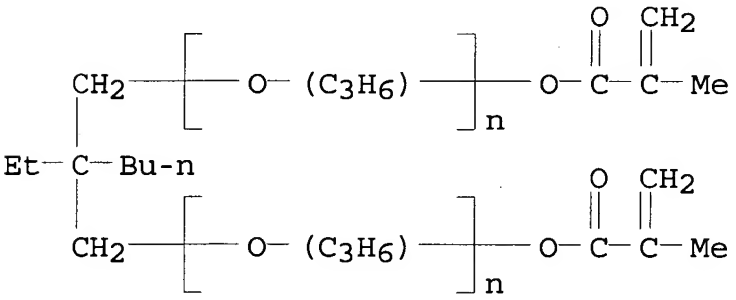
CM 1

CRN 201615-26-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

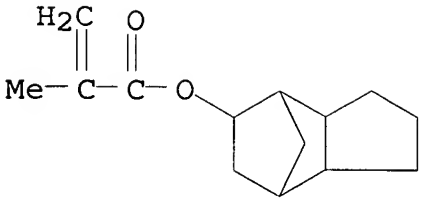
CM 2

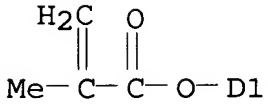
CRN 179670-66-7
CMF (C3 H6 O)n (C3 H6 O)n C17 H28 O4
CCI IDS, PMS



CM 3

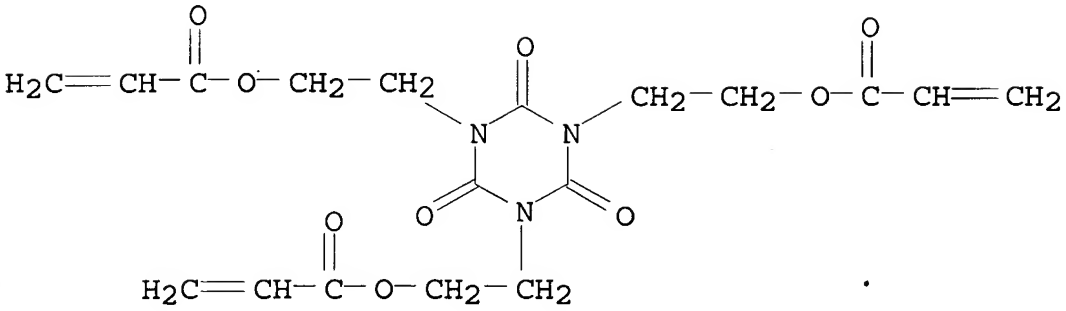
CRN 107293-48-1
CMF C18 H24 O4
CCI IDS





CM 4

CRN 40220-08-4
CMF C18 H21 N3 O9



IC ICM C08F222-10
ICS C08F220-28; C08F220-30; G02B001-04
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 63
IT **Lenses**
Optical instruments
Transparent materials
(polymerizable monomer compns., transparent polymer substrates, and resulting optical and ophthalmol. articles)
IT 219993-42-7P 219993-44-9P 219993-46-1P 219993-47-2P
219993-48-3P 219993-50-7P 219993-53-0P 219993-55-2P
219993-56-3P 219993-57-4P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymerizable monomer compns., transparent polymer substrates, and resulting optical and ophthalmol. articles)

L39 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1998:36020 Document No. 128:128953 Monomer compositions for casting, transparent resins with low densities, tensile strength, and good dyeability, manufacture of the resins, and plastic **lenses.** Kawai, Noriyasu; Kawai, Hiromasa (Hitachi Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10007748 A2 19980113 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-160191 . 19960620.

AB Title compns. comprise 1-80:1-95:0-90 (A) monomers having alkylene oxide groups R1O(R2O)mC6H4-p-CMe2-p-C6H4(OR3)nOR4 [I; R1, R4 = (meth)acryloyl; R2, R3 = C1-5 alkylene; m + n = 9-50], (B) polyfunctional (meth)acrylates R5OCH2CR7R8CH2OR6 [II; R5, R6 = (meth)acryloyl; R7, R8 = C1-6 monovalent hydrocarbyl], and (C) copolymerizable vinyl monomers. Title resins manufactured by polymerization of the said compns. and **lenses** containing the resins are also claimed. Thus, styrene 50, 2,2-bis[4-(methacryloxypentaethoxy)phenyl]propane 28, and 2,2-dimethyl-1,3-propanediol dimethacrylate 22 parts were cast and cured to give a **lens** showing d. 1.13 g/cm3, haze value (ASTM D 1003) 0.5%, and tensile strength 10 kg.

IT **201943-08-0P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of transparent poly(meth)acrylates with low densities, tensile strength, and good dyeability for **lenses**)

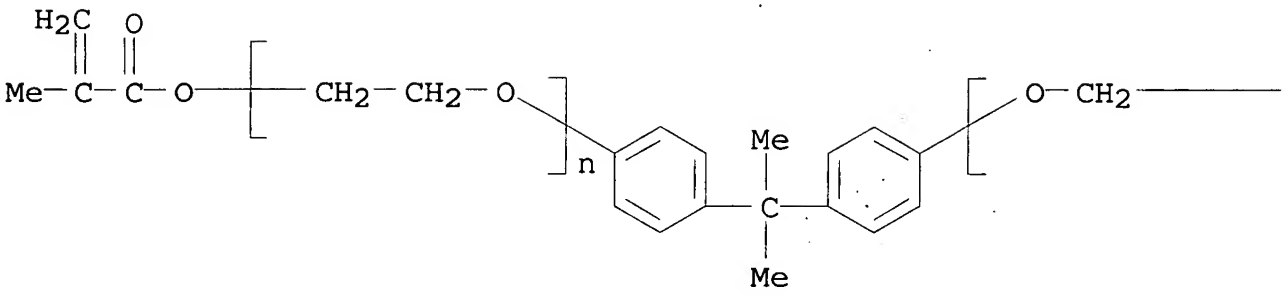
RN 201943-08-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

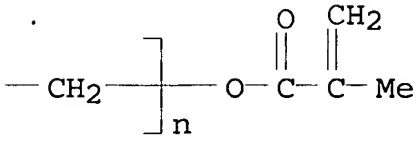
CM 1

CRN 41637-38-1
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
CCI PMS

PAGE 1-A

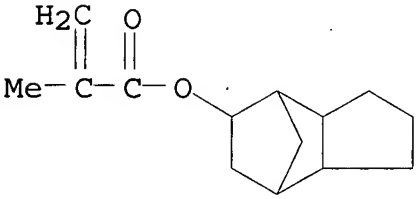


PAGE 1-B



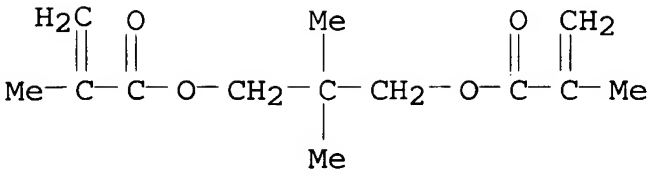
CM 2

CRN 34759-34-7
CMF C14 H20 O2



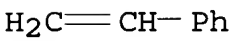
CM 3

CRN 1985-51-9
CMF C13 H20 O4



CM 4

CRN 100-42-5
CMF C8 H8



IC ICM C08F290-06
ICS G02B001-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35
ST acrylate alkylene oxide styrene blend casting; **lens** plastic methacrylate vinyl polymer transparency; dyeability plastic **lens** acrylate manuf
IT **Lenses**
Transparent materials
(manufacture of transparent poly(meth)acrylates with low densities, tensile strength, and good dyeability for **lenses**)
IT 201937-25-9P 201937-28-2P 201937-30-6P 201937-31-7P
201937-32-8P **201943-08-0P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of transparent poly(meth)acrylates with low densities, tensile strength, and good dyeability for **lenses**)

L39 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1997:88689 Document No. 126:105160 Ethylene polymer gasket for use in plastic **lens** manufacturing. Kawai, Akyasu; Kawai, Hiromasa (Hitachi Chemical Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 08302336 A2 19961119 Heisei, 21 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-111721 19950510.
AB The title gaskets consist of 10-100 parts ethylene-α-olefin copolymers prepared using metallocene catalysts and 0-90 parts ethylene-α-olefin copolymers prepared using non-metallocene catalysts. A gasket from an ethylene-1-octene copolymer was used to prepare an ethylene glycol dimethacrylate-Me methacrylate-styrene

copolymer **lens.**

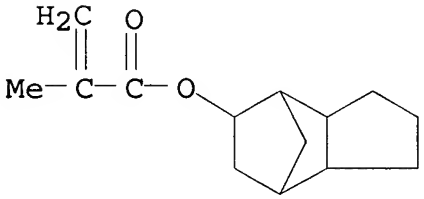
IT **169811-57-8P 169811-61-4P 181772-53-2P**
185825-61-0P 185825-64-3P 185825-68-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ethylene polymer gasket for use in plastic **lens** manufacturing)

RN 169811-57-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

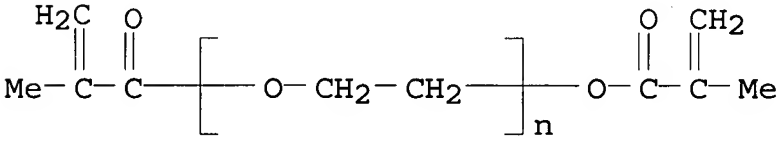
CM 1

CRN 34759-34-7
CMF C14 H20 O2



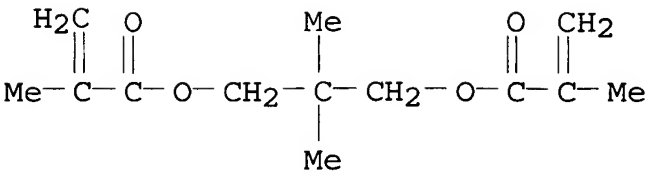
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



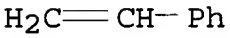
CM 3

CRN 1985-51-9
CMF C13 H20 O4



CM 4

CRN 100-42-5
CMF C8 H8

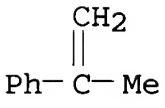


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

CRN 98-83-9
CMF C9 H10

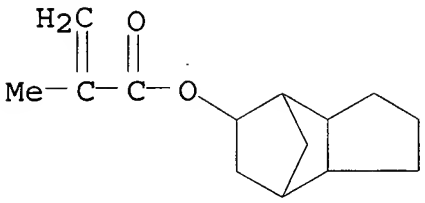


RN 169811-61-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

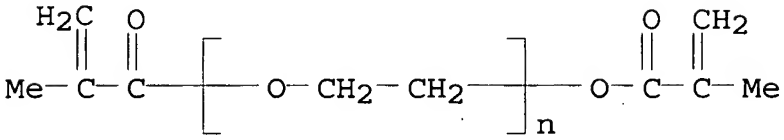
CRN 34759-34-7

CMF C14 H20 O2



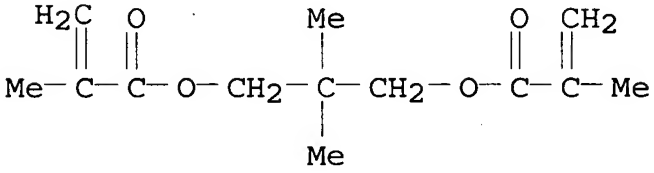
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



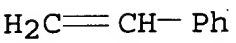
CM 3

CRN 1985-51-9
CMF C13 H20 O4



CM 4

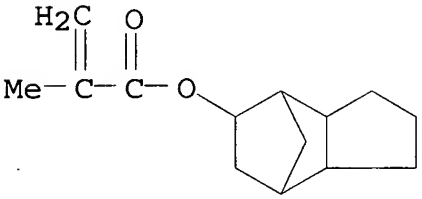
CRN 100-42-5
CMF C8 H8



RN 181772-53-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenylbenzene, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

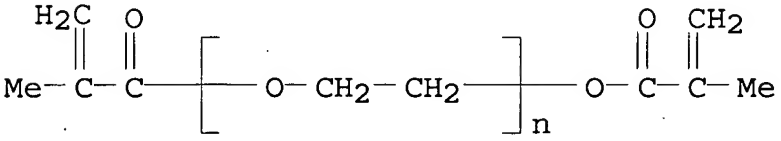
CM 1

CRN 34759-34-7
CMF C14 H20 O2



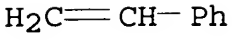
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



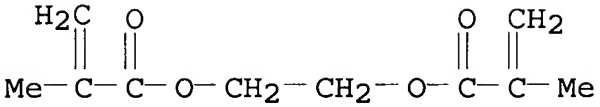
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

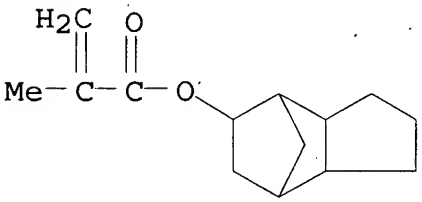
CRN 97-90-5
CMF C10 H14 O4



RN 185825-61-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

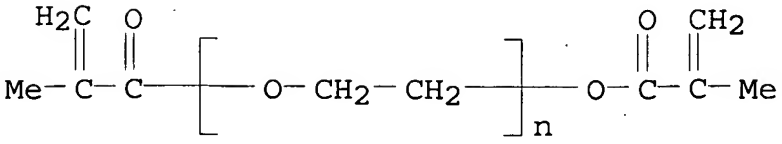
CM 1

CRN 34759-34-7
CMF C14 H20 O2



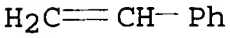
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 3

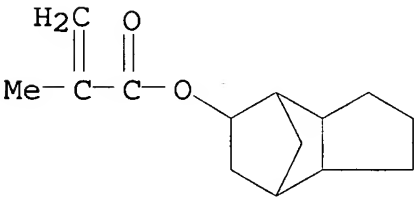
CRN 100-42-5
CMF C8 H8



RN 185825-64-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,10-decanediyl ester, polymer with ethenylbenzene, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

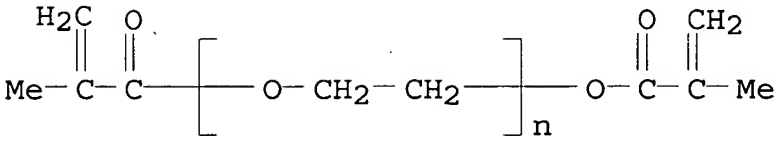
CM 1

CRN 34759-34-7
CMF C14 H20 O2



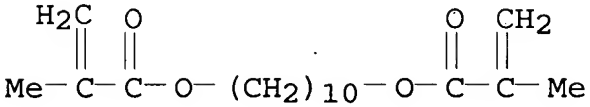
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



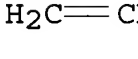
CM 3

CRN 6701-13-9
CMF C18 H30 O4



CM 4

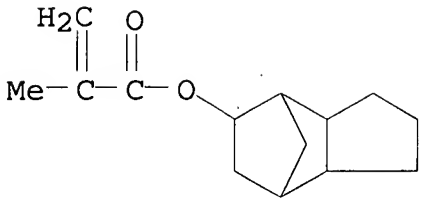
CRN 100-42-5
CMF C8 H8



RN 185825-68-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with 2,2-dimethyl-1,3-propanediyl di-2-propenoate, ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

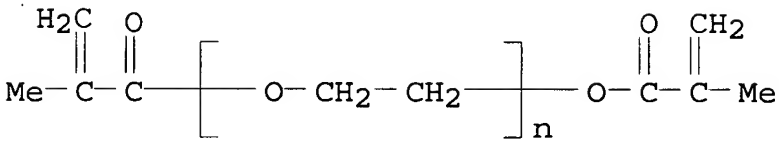
CM 1

CRN 34759-34-7
CMF C14 H20 O2



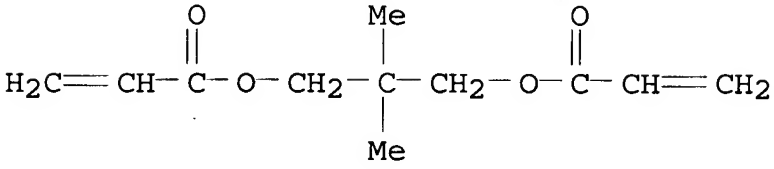
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 3

CRN 2223-82-7
CMF C11 H16 O4



CM 4

CRN 100-42-5
CMF C8 H8

IC ICM C09K003-10
ICS F16J015-10; G02C007-02
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73
ST **lens** gasket ethylene copolymer; metallocene catalyst ethylene copolymer; ethylene olefin copolymer gasket
IT Gaskets
Lenses
Polymerization catalysts
(ethylene polymer gasket for use in plastic **lens** manufacturing)
IT Metallocenes
RL: CAT (Catalyst use); USES (Uses)
(ethylene polymer gasket for use in plastic **lens** manufacturing)
IT 26221-73-8P, Ethylene-1-octene copolymer 53196-70-6P, Ethylene glycol dimethacrylate-methyl methacrylate-styrene copolymer **169811-57-8P 169811-61-4P 181772-53-2P**
185825-58-5P 185825-59-6P 185825-60-9P **185825-61-0P**
185825-62-1P 185825-63-2P **185825-64-3P** 185825-65-4P
185825-66-5P 185825-67-6P **185825-68-7P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ethylene polymer gasket for use in plastic **lens** manufacturing)
IT 26221-73-8, Affinity SM 1250
RL: TEM (Technical or engineered material use); USES (Uses)
(ethylene polymer gasket for use in plastic **lens** manufacturing)

L39 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1997:1927 Document No. 126:32683 Manufacture of plastic **lenses** with high transparency and good heat and impact resistance. Fukushima, Hiroshi; Motonaga, Akira; Morita, Mitsuharu; Makino, Shinji (Mitsubishi Rayon Co, Japan). Jpn. Kokai Tokkyo Koho JP 08258172 A2 19961008 Heisei, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-68422 19950327.
AB The title method involves the following steps; 1st partial polymerization of compns. comprising (A) 20-80 parts ≥2 (meth)acryloyl-containing urethane (meth)acrylates and/or epoxy (meth)acrylates, (B) 10-70 parts ≥2 (meth)acryloyl-containing multifunctional ester-type (meth)acrylates, (C) 5-50 parts monofunctional ester-type mono(meth)acrylates, (D) 0-30 parts vinyl monomers, (E) 0.005-5 parts active energy beam-sensitive radical polymerization initiators, and (F) 0.005-5 parts heat-sensitive radical polymerization initiators by

irradiation of active energy beam and 2nd curing by heating. Thus, urethane dimethacrylate of isophorone diisocyanate and 2-hydroxypropyl methacrylate 40, nonabutylene glycol dimethacrylate 30, isobornyl methacrylate 30, 2,4,6-trimethylbenzoyldiphenylpohosphine oxide 0.05, and tert-Bu peroxyisobutyrate 0.1 g were irradiated with UV light and then heated at 120° to give a test piece showing light transmittance 92% and good chemical, heat, and impact resistance.

IT **184591-07-9P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of plastic **lenses** with high transparency and good heat and impact resistance)

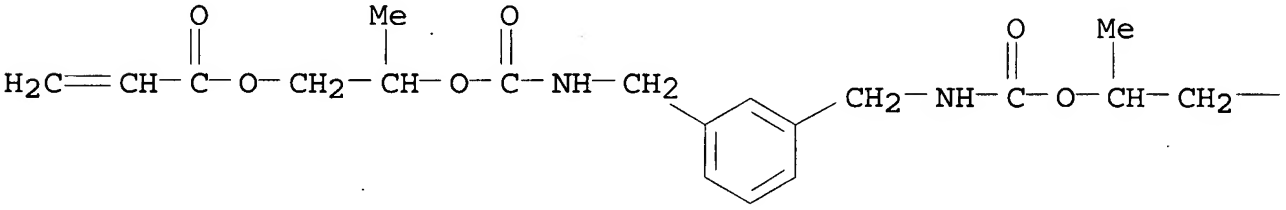
RN 184591-07-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane], α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl), 1,3-phenylenebis[methyleneiminocarbonyloxy(2-methyl-2,1-ethanediyl)] di-2-propenoate and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

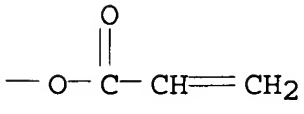
CM 1

CRN 184591-01-3
CMF C22 H28 N2 O8

PAGE 1-A

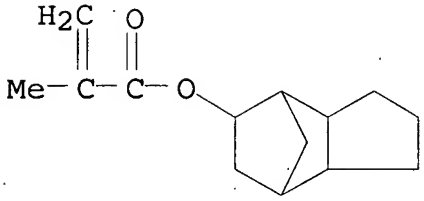


PAGE 1-B



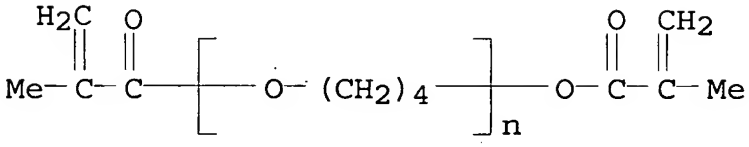
CM 2

CRN 34759-34-7
CMF C14 H20 O2



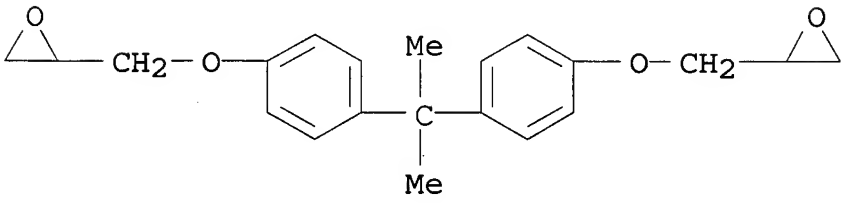
CM 3

CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS



CM 4

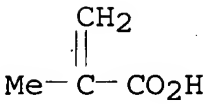
CRN 1675-54-3
CMF C21 H24 O4



CM 5

CRN 79-41-4

CMF C4 H6 O2



IC ICM B29D011-00
ICS C08F290-06; C08J005-00; G02B001-04
ICI B29K033-00, C08L033-06
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35
ST acrylic polymer **lens** manuf transparency; casting polymn plastic **lens** transparency; chem resistance acrylic polymer **lens**; heat resistance acrylic polymer **lens**; impact resistance acrylic polymer **lens**
IT Polymerization
(casting; manufacture of plastic **lenses** with high transparency and good heat and impact resistance)
IT Chemically resistant materials
Heat-resistant materials
Impact-resistant materials
Lenses
Transparent materials
(manufacture of plastic **lenses** with high transparency and good heat and impact resistance)
IT 184591-00-2P 184591-02-4P 184591-03-5P 184591-04-6P 184591-06-8P **184591-07-9P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of plastic **lenses** with high transparency and good heat and impact resistance)
IT 109-13-7, tert-Butyl peroxyisobutyrate 3006-82-4, tert-Butyl peroxy-2-ethylhexanoate 15206-55-0, Methylphenyl glyoxylate 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide
RL: CAT (Catalyst use); USES (Uses)
(polymerization initiators; manufacture of plastic **lenses** with high transparency and good heat and impact resistance)

L39 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1996:607169 Document No. 125:249817 Transparent lightweight heat-resistant polymers with high refractive index and tensile strength and improved dyeability and adhesion to organic silane coatings and their manufacture and **lenses** therefrom.
Kawai, Akyasu; Suzuki, Minoru; Kawai, Hiromasa (Hitachi Chemical Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 08176240 A2 19960709 Heisei,

14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-321826 19941226.

AB The title polymers are prepared by polymerizing compns. containing 15-60% styrene, 1-50% (meth)acrylic acid esters having the ester component containing C5-22 aliphatic hydrocarbon groups, 30-60% polyfunctional monomers containing 1-90% R1O(R2O)nR3 (R1 = acryloyl, methacryloyl, R2 = C1-5 alkylene; R3 = acryloyl, methacryloyl; n = 9-50) and containing no R4OCH2CR6R7CH2OR6 (R4, R5 = acryloyl, methacryloyl; R6, R7 = C1-6 hydrocarbyl), and 0-40% copolymerizable vinyl monomers to give transparent polymers having sp. gr. ≤1.20, refractive index (n) ≥1.54, and Abbe number ≥35. A composition comprising styrene 50, tricyclo[5.2.1.02,6]deca-8-yl methacrylate 18, ethylene glycol dimethacrylate 18, and tetradecaethylene glycol dimethacrylate 14 parts and 1.0% α-methylstyrene dimer and diisopropyl peroxydicarbonate 1.0, tert-Bu peroxy(2-ethylhexanoate) 0.5, and tert-Bu peroxyisopropylcarbonate 0.1 part were stirred, cast, kept 6 h at 25°, heated to 90° over 14 h, heat treated 2 h at 120°, cooled to room temperature, coated with KP 64C (organic silane), and cured 30 min at room temperature, 30 min at 90°, and 1 h at 120° to give a **lens** with n 1.55, Abbe number 41, sp. gr. 1.14, glass transition temperature 118°, haze 0.5%, tensile strength 15 kg, and dyeability rating (5 best, 1 worst) 5, and good coating adhesion.

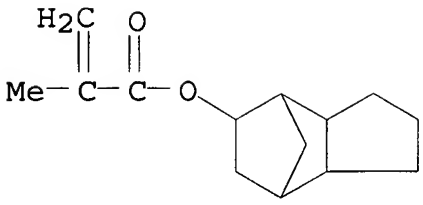
IT **181767-38-4P 181772-53-2P 181772-59-8P 181772-69-0P 182330-04-7P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of; for transparent lightweight heat-resistant **lenses** with high refractive index and tensile strength and improved dyeability and adhesion to organic silanes)

RN 181767-38-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenylbenzene, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

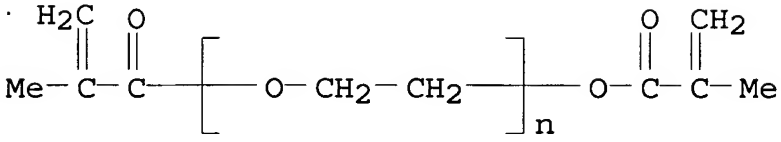
CM 1

CRN 34759-34-7
CMF C14 H20 O2



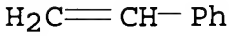
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



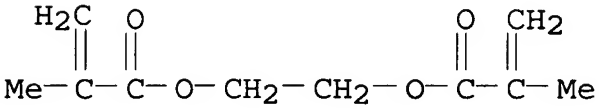
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

CRN 97-90-5
CMF C10 H14 O4

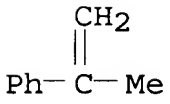


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

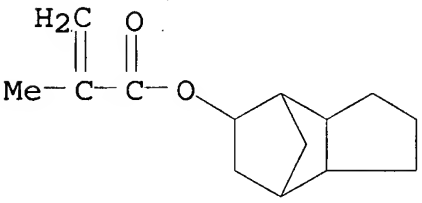
CRN 98-83-9
CMF C9 H10



RN 181772-53-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenylbenzene, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

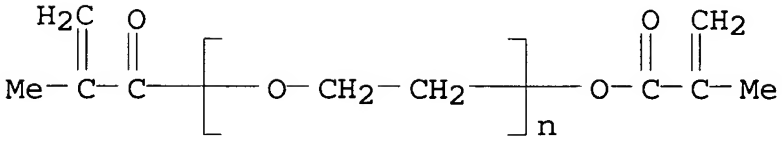
CM 1

CRN 34759-34-7
CMF C14 H20 O2



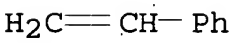
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



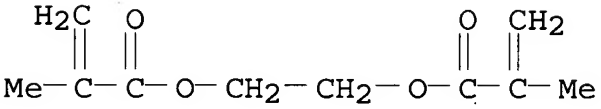
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

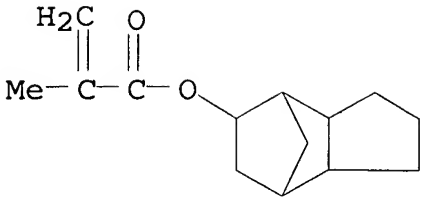
CRN 97-90-5
CMF C10 H14 O4



RN 181772-59-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

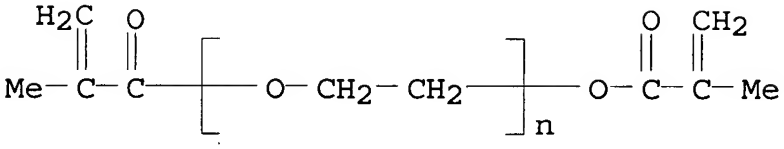
CM 1

CRN 34759-34-7
CMF C14 H20 O2



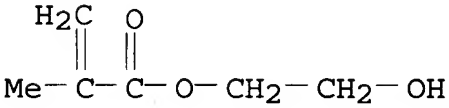
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 3

CRN 868-77-9
CMF C6 H10 O3

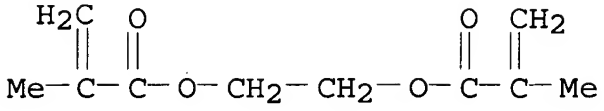


CM 4

CRN 100-42-5
CMF C8 H8

CM 5

CRN 97-90-5
CMF C10 H14 O4

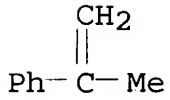


CM 6

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 7

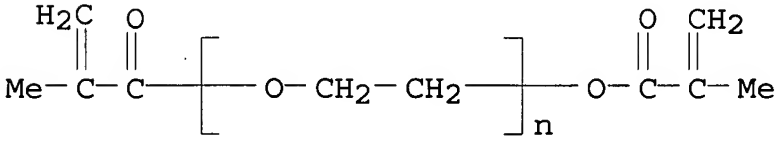
CRN 98-83-9
CMF C9 H10



RN 181772-69-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with cyclohexyl 2-methyl-2-propenoate, ethenylbenzene, (1-methylethenyl)benzene dimer and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

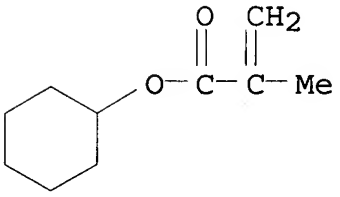
CM 1

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



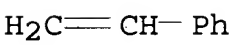
CM 2

CRN 101-43-9
CMF C10 H16 O2



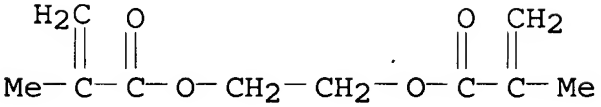
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

CRN 97-90-5
CMF C10 H14 O4

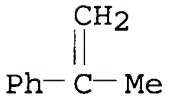


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

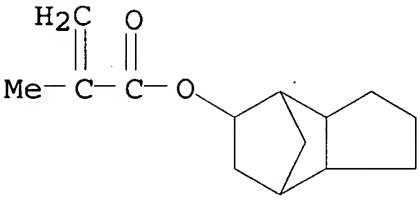
CRN 98-83-9
CMF C9 H10



RN 182330-04-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, diester with 1,2,3-propanetriol, polymer with ethenylbenzene, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

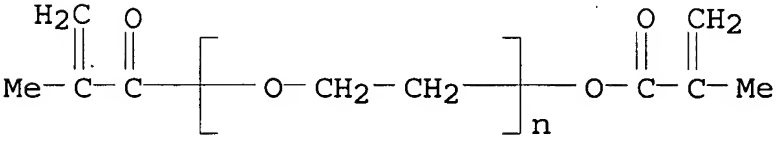
CM 1

CRN 34759-34-7
CMF C14 H20 O2



CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS

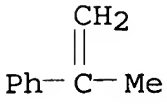


CM 3

CRN 100-42-5
CMF C8 H8

CM 4

CRN 98-83-9
CMF C9 H10

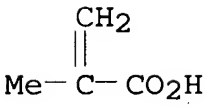


CM 5

CRN 28497-59-8
CMF C11 H16 O5
CCI IDS

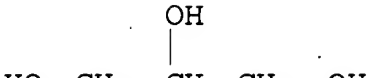
CM 6

CRN 79-41-4
CMF C4 H6 O2



CM 7

CRN 56-81-5
CMF C3 H8 O3



IC ICM C08F220-28
ICS C08F212-08; C08F220-18; C08F290-08; G02B001-04; G02B003-00
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35, 73
ST methacrylate polymer **lens** lightweight transparency; styrene copolymer **lens** lightweight transparency; plastic **lens** lightweight transparency; tensile strength lightweight methacrylate polymer **lens**; dyeability lightweight methacrylate polymer **lens**; silane coating adhesion methacrylate polymer **lens**; refractive index lightweight methacrylate polymer **lens**; heat resistance lightweight methacrylate polymer **lens**
IT Adhesion
(improved; of transparent lightweight styrene-(meth)acrylic acid ester copolymer **lenses** to organic silane coating materials)
IT **Lenses**
(transparent lightweight heat-resistant styrene-(meth)acrylic acid ester copolymers with high refractive index and tensile strength and improved dyeability and adhesion to organic silanes for)
IT Heat-resistant materials
(transparent lightweight styrene-(meth)acrylic acid ester copolymer **lenses** with high refractive index and tensile strength and improved dyeability and adhesion to organic silanes)
IT 182016-16-6, KP 64C
RL: TEM (Technical or engineered material use); USES (Uses)
(coating; on transparent lightweight styrene-(meth)acrylic acid ester copolymer **lenses** with improved adhesion to)
IT **181767-38-4P** 181772-44-1P **181772-53-2P**
181772-59-8P 181772-64-5P **181772-69-0P**
182330-03-6P **182330-04-7P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of; for transparent lightweight heat-resistant **lenses** with high refractive index and tensile strength and improved dyeability and adhesion to organic silanes)

L39 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1996:605240 Document No. 125:223946 Plastic **lenses** and manufacture by casting molding. Kawai, Akyasu; Kawai, Hiromasa

(Hitachi Chemical Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 08176206 A2 19960709 Heisei, 20 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-324112 19941227.

AB Ethylene-σ-olefin copolymers (I) are used as gaskets for casting molds, which cause lowering of light transmittance at 400 nm <0.5% when 1 part I are immersed in 5 parts monomers at 40° for 6 h and have DSC heat of fusion <10 J/g at >100°. Thus, gaskets of Tafmer A 4090 are used in the radical polymerization of styrene 41, tricyclo[5.2.1.02,6]deca-8-yl methacrylate 24, 2,2-dimethyl-1,3-propanediol dimethacrylate 15, tetraethylene glycol dimethacrylate 15, and α-methylstyrene dimer 1 part.

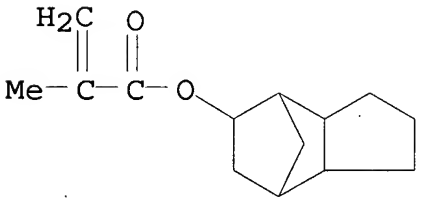
IT **169811-57-8P 169811-59-0P 169811-60-3P 169811-61-4P 181767-35-1P 181767-38-4P 181767-39-5P**
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(**lenses**; rubber gaskets for casting molds for plastic **lenses**)

RN 169811-57-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

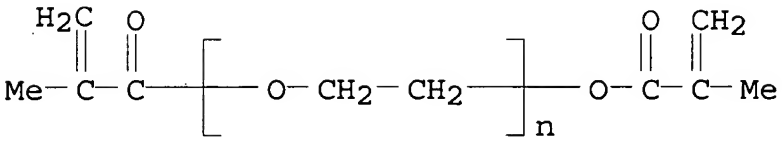
CM 1

CRN 34759-34-7
CMF C14 H20 O2



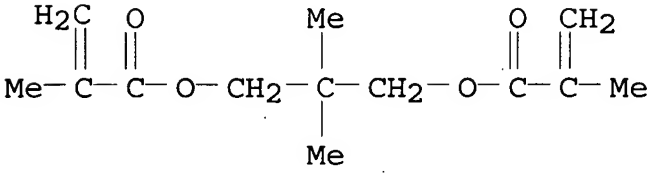
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



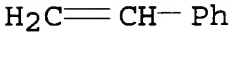
CM 3

CRN 1985-51-9
CMF C13 H20 O4



CM 4

CRN 100-42-5
CMF C8 H8

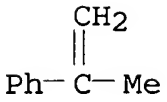


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

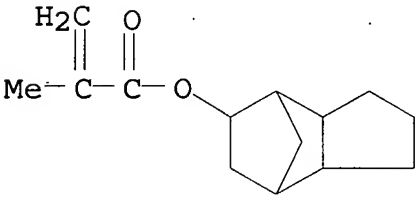
CRN 98-83-9
CMF C9 H10



RN 169811-59-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with 2,2-dimethyl-1,3-propanediyl di-2-propenoate, ethenylbenzene, (1-methylethenyl)benzene dimer and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

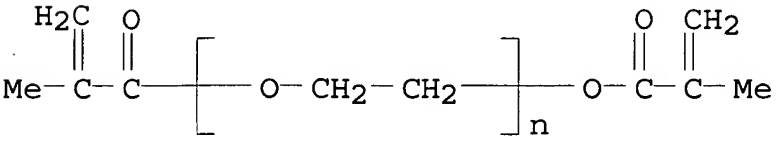
CM 1

CRN 34759-34-7
CMF C14 H20 O2



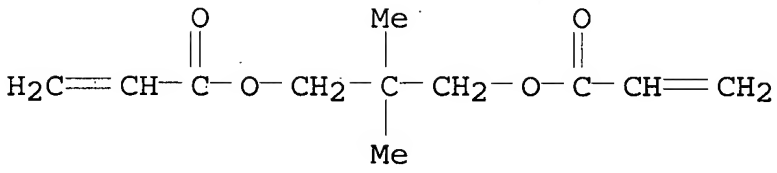
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



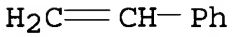
CM 3

CRN 2223-82-7
CMF C11 H16 O4



CM 4

CRN 100-42-5
CMF C8 H8

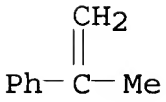


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

CRN 98-83-9
CMF C9 H10

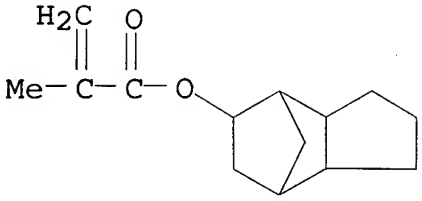


RN 169811-60-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

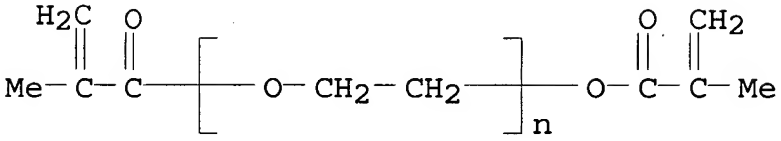
CRN 34759-34-7

CMF C14 H20 O2



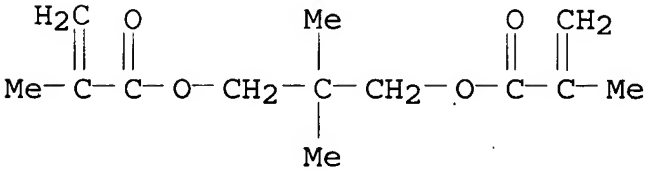
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



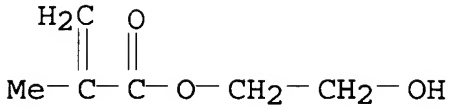
CM 3

CRN 1985-51-9
CMF C13 H20 O4



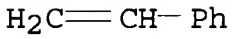
CM 4

CRN 868-77-9
CMF C6 H10 O3



CM 5

CRN 100-42-5
CMF C8 H8

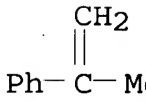


CM 6

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 7

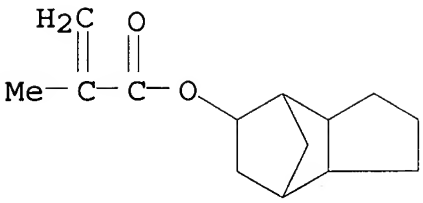
CRN 98-83-9
CMF C9 H10



RN 169811-61-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

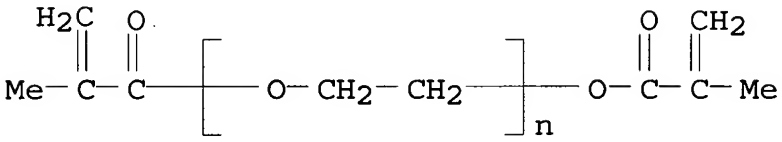
CM 1

CRN 34759-34-7
CMF C14 H20 O2



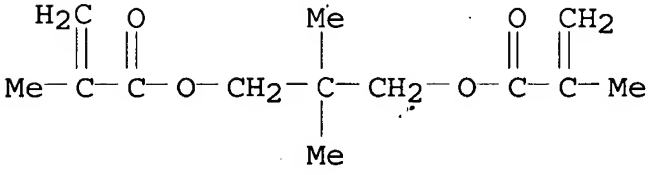
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 3

CRN 1985-51-9
CMF C13 H20 O4



CM 4

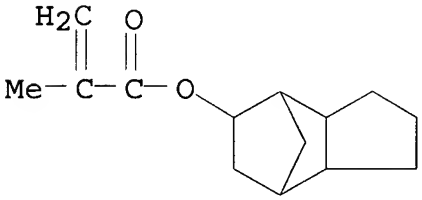
CRN 100-42-5
CMF C8 H8

RN 181767-35-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with ethenylbenzene, (1-methylethenyl)benzene dimer and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

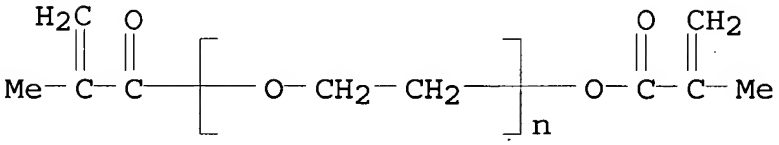
CM 1

CRN 34759-34-7
CMF C14 H20 O2



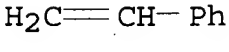
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 3

CRN 100-42-5
CMF C8 H8



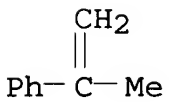
CM 4

CRN 6144-04-3

CMF (C9 H10)2
CCI PMS

CM 5

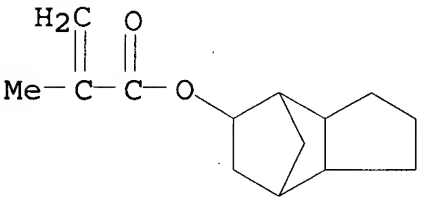
CRN 98-83-9
CMF C9 H10



RN 181767-38-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenylbenzene, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

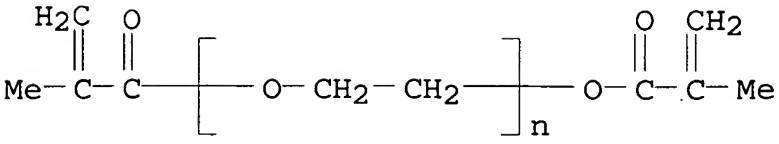
CM 1

CRN 34759-34-7
CMF C14 H20 O2



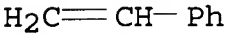
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



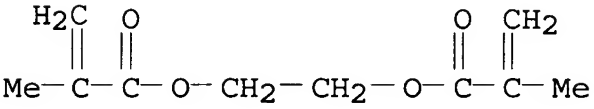
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

CRN 97-90-5
CMF C10 H14 O4

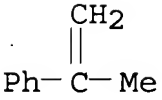


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

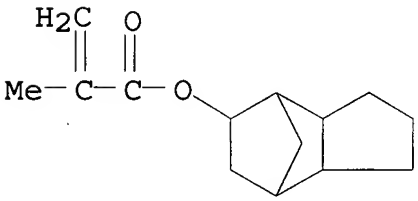
CRN 98-83-9
CMF C9 H10



RN 181767-39-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,10-decanediyl ester, polymer with ethenylbenzene, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

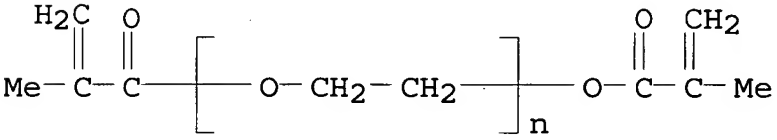
CM 1

CRN 34759-34-7
CMF C14 H20 O2



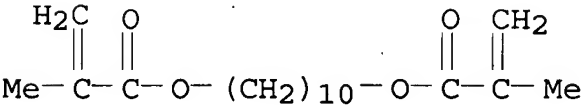
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



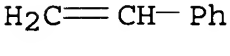
CM 3

CRN 6701-13-9
CMF C18 H30 O4



CM 4

CRN 100-42-5
CMF C8 H8

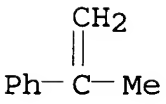


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

CRN 98-83-9
CMF C9 H10



IC ICM C08F002-00
ICS B29C039-02; B29C039-22; G02B001-04
ICI B29K023-00, B29L011-00
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 39, 63
ST gasket casting mold **lens**; butene ethylene rubber gasket; vinyl polymer **lens** casting
IT **Lenses**
(rubber gaskets for casting molds for plastic **lenses**)
IT Gaskets
(rubber; rubber gaskets for casting molds for plastic **lenses**)
IT Rubber, synthetic
RL: DEV (Device component use); USES (Uses)
(butene-ethylene, rubber gaskets for casting molds for plastic **lenses**)
IT Molding apparatus for plastics and rubbers
(casting, rubber gaskets for casting molds for plastic **lenses**)

IT Vinyl compounds, uses
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(polymers, **lenses**; rubber gaskets for casting molds for plastic **lenses**)
IT Polymerization
(radical, rubber gaskets for casting molds for plastic **lenses**)
IT Alkenes, uses
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(α-, polymers with ethylene, LLDPE; gaskets for casting molds for plastic **lenses**)
IT 74-85-1D, Ethene, polymers with α-olefins
RL: DEV (Device component use); USES (Uses)
(LLDPE; gaskets for casting molds for plastic **lenses**)
IT 169811-52-3P 169811-53-4P 169811-54-5P 169811-55-6P
169811-56-7P **169811-57-8P** 169811-58-9P
169811-59-0P 169811-60-3P 169811-61-4P
181767-29-3P 181767-31-7P 181767-32-8P 181767-33-9P
181767-34-0P **181767-35-1P** 181767-36-2P 181767-37-3P
181767-38-4P 181767-39-5P 181767-40-8P
181768-05-8P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(**lenses**; rubber gaskets for casting molds for plastic **lenses**)

L39 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1995:898960 Document No. 123:287213 Transparent acrylate resins and plastic **lens.** Kawai, Toshiyasu; Suzuki, Minoru; Kawai, Hiromasa; Kanega, Fumiaki (Hitachi Chemical Co., Ltd., Japan). Eur. Pat. Appl. EP 661307 A2 19950705, 19 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1994-309678 19941222. PRIORITY: JP 1993-329446 19931227; JP 1994-187173 19940809.
AB A transparent resin obtained by polymerizing a monomer having an alkylene oxide group, a polyfunctional (meth)acrylate having a divalent branched hydrocarbon group and optionally other copolymerizable vinyl monomers is suitable as an material for a plastic **lens** with excellent heat resistance and hue. An α-methylstyrene dimer-Me methacrylate-neopentyl glycol diacrylate-nonaethylene glycol dimethacrylate-styrene copolymer had low haze and high hardness.
IT **169811-57-8P 169811-59-0P 169811-60-3P**
169811-61-4P

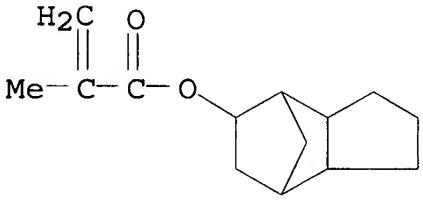
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(transparent acrylate resins and plastic **lens**)

RN 169811-57-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

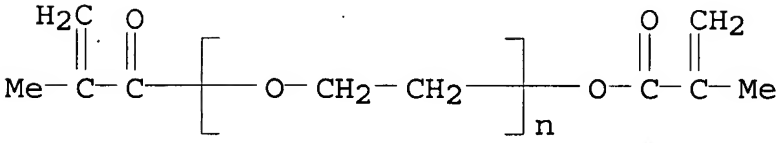
CM 1

CRN 34759-34-7
CMF C14 H20 O2



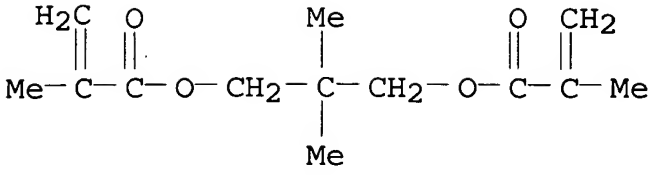
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



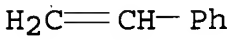
CM 3

CRN 1985-51-9
CMF C13 H20 O4



CM 4

CRN 100-42-5
CMF C8 H8

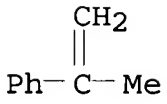


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

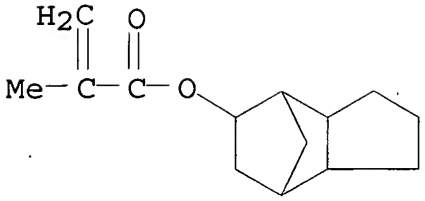
CRN 98-83-9
CMF C9 H10



RN 169811-59-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with 2,2-dimethyl-1,3-propanediyl di-2-propenoate, ethenylbenzene, (1-methylethenyl)benzene dimer and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

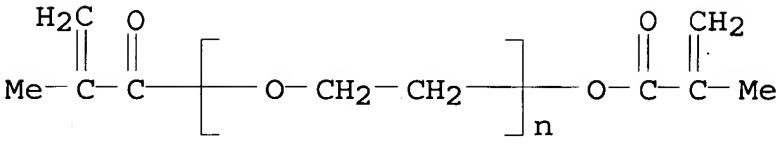
CM 1

CRN 34759-34-7
CMF C14 H20 O2



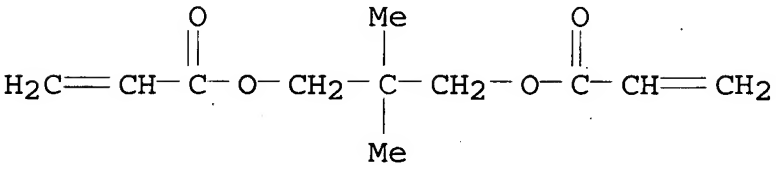
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



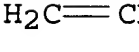
CM 3

CRN 2223-82-7
CMF C11 H16 O4



CM 4

CRN 100-42-5
CMF C8 H8

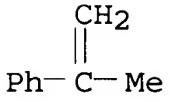


CM 5

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 6

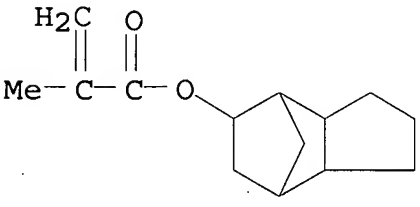
CRN 98-83-9
CMF C9 H10



RN 169811-60-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, (1-methylethenyl)benzene dimer, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

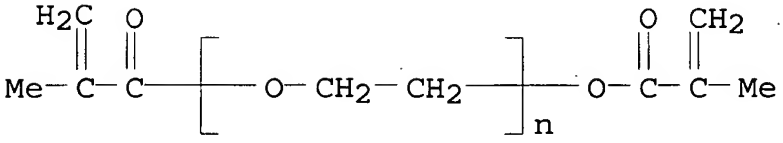
CM 1

CRN 34759-34-7
CMF C14 H20 O2



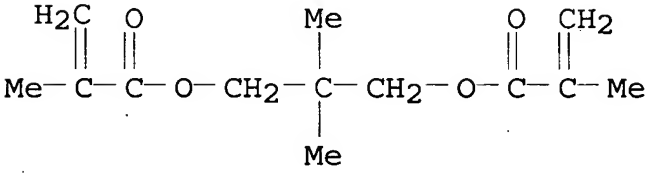
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



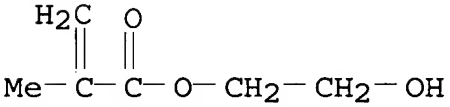
CM 3

CRN 1985-51-9
CMF C13 H20 O4



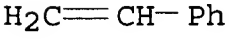
CM 4

CRN 868-77-9
CMF C6 H10 O3



CM 5

CRN 100-42-5
CMF C8 H8

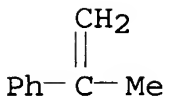


CM 6

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 7

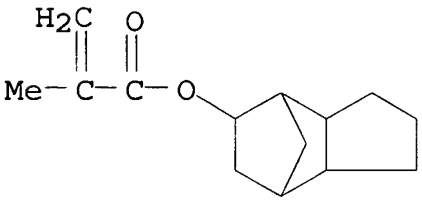
CRN 98-83-9
CMF C9 H10



RN 169811-61-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2-dimethyl-1,3-propanediyl ester, polymer with ethenylbenzene, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

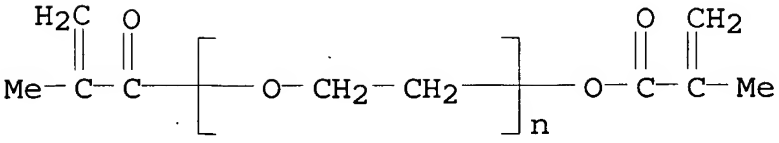
CM 1

CRN 34759-34-7
CMF C14 H20 O2



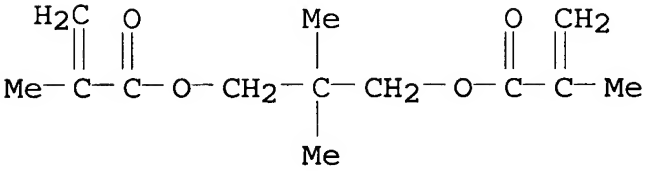
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



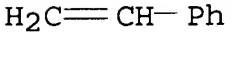
CM 3

CRN 1985-51-9
CMF C13 H20 O4



CM 4

CRN 100-42-5
CMF C8 H8



IC ICM C08F220-28
ICS C08F220-20; G02B001-04
CC 35-4 (Chemistry of Synthetic High Polymers)
ST oxyalkylene acrylate copolymer transparent **lens**
IT **Lenses**
Transparent materials
(transparent acrylate resins and plastic **lens**)
IT 169811-52-3P 169811-53-4P 169811-54-5P 169811-55-6P
169811-56-7P **169811-57-8P** 169811-58-9P
169811-59-0P 169811-60-3P 169811-61-4P
169811-62-5P
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(transparent acrylate resins and plastic **lens**)

L39 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1995:347274 Document No. 123:35441 Photocurable resin compositions and their use in optical **lenses.** Saito, Osamu; Tomono, Haruo (Dainippon Ink Chemical Industry Co., Japan; Canon K. K.). Jpn. Kokai Tokkyo Koho JP 06298886 A2 19941025 Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-3159 19940117. PRIORITY: JP 1993-5954 19930118.

AB Title compns., useful for manufacture of abrasion-resistant coatings on aspherical **lenses**, comprise (A) polyfunctional urethane-modified polyester (meth)acrylates with number average mol. weight (Mn) ≥700 having a structure of polyester oligomers from polybasic acids and polyhydric alcs. linked to (meth)acrylate groups via urethane linkage, (B) polyfunctional (meth)acrylates with Mn ≤700, (C) monofunctional acrylates, and (D) photoinitiators. Thus, a concave glass **lens** coated on one side with a mixture of urethane acrylate (prepared from adipic acid, 1,4-butanediol, IPDI, and 2-hydroxyethyl acrylate) 25, tris(2-acryloyloxyethyl) isocyanurate 15, trimethylolpropane propoxylate triacrylate 50, cyclohexyl acrylate 10, and 1-hydroxycyclohexyl Ph ketone 2 parts, and provided with a UV-cured reflection-preventing layer (three layers of SiO, TiO2, and SiO2) showed good scratch and solvent resistance.

IT **164218-55-7P 164218-59-1P**, Cyclohexyl acrylate-2-hydroxyethyl acrylate-isophorone diisocyanate-phthalic anhydride-propylene glycol-trimellitic anhydride-trimethylolpropanepropoxy triacrylate copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

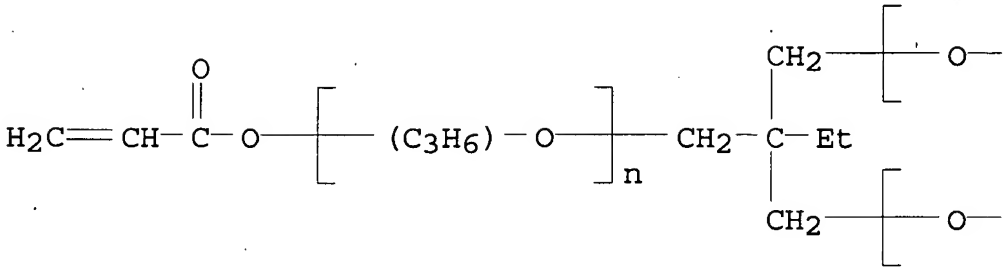
RN 164218-55-7 HCAPLUS

CN Hexanedioic acid, polymer with 1,4-butanediol, cyclohexyl 2-propenoate, α-hydro-ω-[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), 2-hydroxyethyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl tri-2-propenoate (9CI) (CA INDEX NAME)

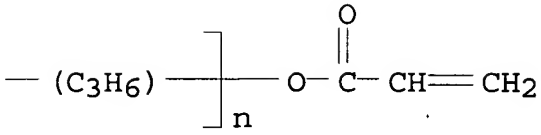
CM 1

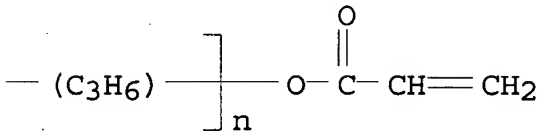
CRN 53879-54-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C15 H20 O6
CCI IDS, PMS

PAGE 1-A



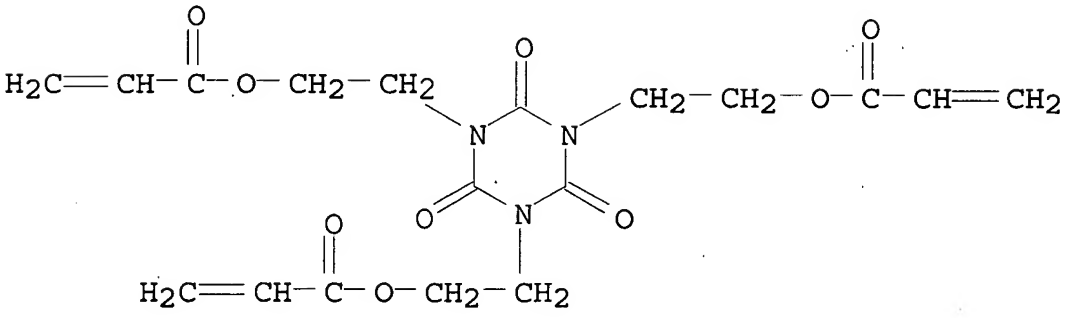
PAGE 1-B





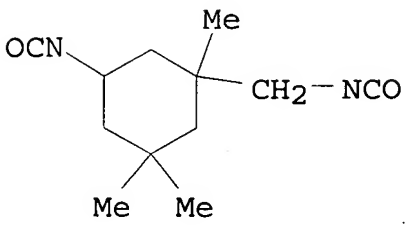
CM 2

CRN 40220-08-4
CMF C18 H21 N3 O9



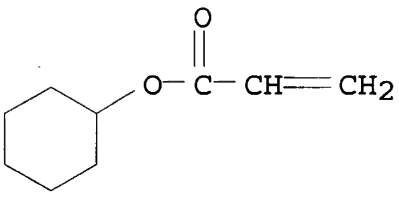
CM 3

CRN 4098-71-9
CMF C12 H18 N2 O2



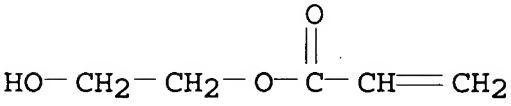
CM 4

CRN 3066-71-5
CMF C9 H14 O2



CM 5

CRN 818-61-1
CMF C5 H8 O3



CM 6

CRN 124-04-9
CMF C6 H10 O4

$HO_2C-(CH_2)_4-CO_2H$

CM 7

CRN 110-63-4
CMF C4 H10 O2

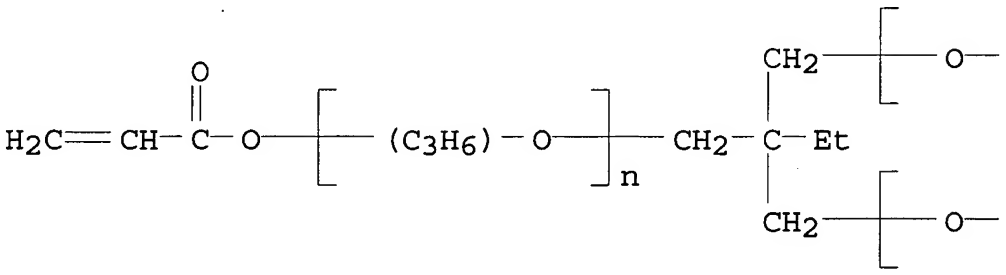
$HO-(CH_2)_4-OH$

RN 164218-59-1 HCAPLUS
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with cyclohexyl 2-propenoate, α-hydro-ω-[(1-oxo-2-propenyl)oxy][poly[oxy(methyl-1,2-ethanediyl)]] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), 2-hydroxyethyl 2-propenoate, 1,3-isobenzofurandione, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 1,2-propanediol (9CI) (CA INDEX NAME)

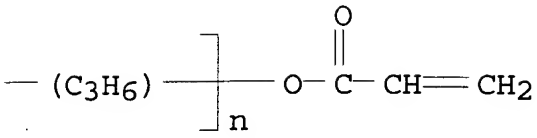
CM 1

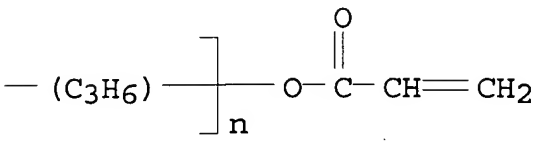
CRN 53879-54-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C15 H20 O6
CCI IDS, PMS

PAGE 1-A



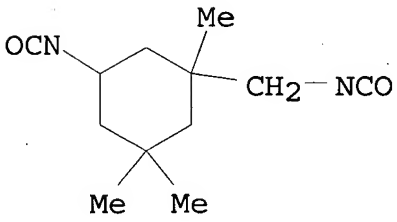
PAGE 1-B





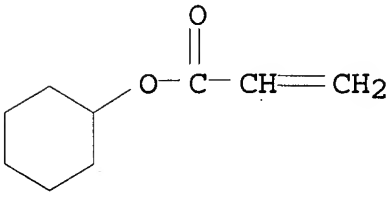
CM 2

CRN 4098-71-9
CMF C12 H18 N2 O2



CM 3

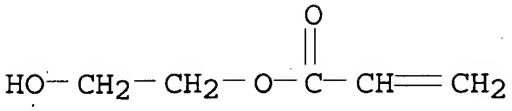
CRN 3066-71-5
CMF C9 H14 O2



CM 4

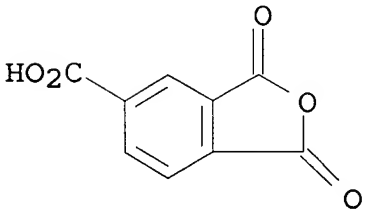
CRN 818-61-1

CMF C5 H8 O3



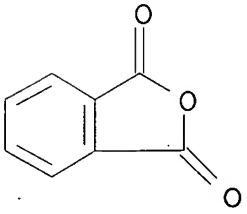
CM 5

CRN 552-30-7
CMF C9 H4 O5



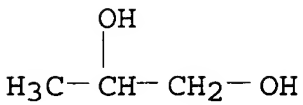
CM 6

CRN 85-44-9
CMF C8 H4 O3



CM 7

CRN 57-55-6
CMF C3 H8 O2



IC ICM C08F299-04
ICS C03C017-32; C08F002-48; C08F299-06; G02B001-04; G03F007-027
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 37
ST photocurable urethane acrylate coating aspherical **lens**; solvent resistant urethane acrylate coating **lens**; abrasion resistant urethane acrylate coating **lens**; polyester polyurethane acrylic polyisocyanurate coating **lens**; cyclohexyl acrylate polyurethane coating **lens**; trimethylolpropane polyoxypropylene triacrylate polyurethane coating **lens**; acryloyloxyethyl isocyanurate polyurethane coating **lens**; hydroxyethyl acrylate polyurethane coating **lens**; butanediol polyurethane coating **lens**; adipic acid polyurethane coating **lens**
IT Coating materials
(abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)
IT **Lenses**
(aspherical; abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)
IT Urethane polymers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyester-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)
IT Urethane polymers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyester-polyisocyanurate-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)
IT Urethane polymers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyester-polyisocyanurate-polyoxyalkylene-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)
IT Polyoxyalkylenes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyester-polyisocyanurate-polyurethane-, abrasion- and

solvent-resistant photocured coatings for aspherical glass **lenses**)

IT Polyisocyanurates
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyester-polyoxyalkylene-polyurethane-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

IT Polyisocyanurates
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyester-polyurethane-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

IT Polyesters, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyisocyanurate-polyoxyalkylene-polyurethane-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

IT Polyesters, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyisocyanurate-polyurethane-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

IT Polyesters, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyurethane-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

IT Acrylic polymers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polyisocyanurate-polyoxyalkylene-polyurethane-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

IT Acrylic polymers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polyisocyanurate-polyurethane-, abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

IT **164218-55-7P** 164218-56-8P, 1,3-Butylene glycol-dicyclohexyloxyethyl methacrylate-3-hydroxypropyl acrylate-isophorone diisocyanate-tetrahydrophthalic anhydride-trimethylolpropane-trimethylolpropane triacrylate-tris(2-acryloyloxyethyl) isocyanurate copolymer 164218-57-9P, Adipic

acid-1,4-butanediol-cyclohexyl acrylate-2-hydroxyethyl acrylate-isophorone diisocyanate-phthalic anhydride-propylene glycol-trimellitic anhydride-tris(2-acryloyloxyethyl) isocyanurate copolymer 164218-58-0P, Adipic acid-1,4-butanediol-cyclohexyl acrylate-dipentaerythritol hexaacrylate-2-hydroxyethyl acrylate-isophorone diisocyanate-phthalic anhydride-propylene glycol-trimellitic anhydride-tris(2-acryloyloxyethyl) isocyanurate copolymer **164218-59-1P**, Cyclohexyl acrylate-2-hydroxyethyl acrylate-isophorone diisocyanate-phthalic anhydride-propylene glycol-trimellitic anhydride-trimethylolpropanepropoxy triacrylate copolymer 164218-60-4P, Cyclohexyl acrylate-1,4-cyclohexylene diisocyanate-dipentaerythritol hexaacrylate-2-hydroxyethyl acrylate-isophorone diisocyanate-phthalic anhydride-propylene glycol-trimellitic anhydride-tris(2-acryloyloxyethyl) isocyanurate copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(abrasion- and solvent-resistant photocured coatings for aspherical glass **lenses**)

L39 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1993:104259 Document No. 118:104259 Monomer compositions for use in plastic **lens**. Fukushima, Hiroshi; Motonaga, Akira; Nakajima, Mikito; Kutsukake, Yusuke (Mitsubishi Rayon Co., Ltd., Japan; Seiko Epson Corp.). Jpn. Kokai Tokkyo Koho JP 04202309 A2 19920723 Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-329476 19901130.

AB Impact- and heat-resistant **lens** with low water absorption and good moldability is prepared from (A) di(meth)acrylates of bisphenol compds.-initiated polyoxyethylene or polyoxypropylene glycols 20-80, (B) di(meth)acrylates of polyoxybutylene glycol 10-60, (C) mono(meth)acrylate compds. 5-60, and (D) ethylenically unsatd. compds. 0-60 parts. A **lens** was prepared from 2,2-bis(4-methacryloyloxyethoxyphenyl)propane 40, nonabutylene glycol dimethacrylate 35, 1,6-hexamethylene glycol dimethacrylate 5, 2,4,6-trimethylbenzoyldiphenylphosphine oxide 0.03, tert-Bu peroxyisobutyrate 0.1, 2-hydroxy-4-methoxybenzophenone 0.65, and tridodecyl phosphate 0.2 g had visible light transmission 91%, refractive index 1.530, saturated water absorption 0.6%, glass temperature 126°, falling ball test 24 g, and Rockwell M hardness 106.

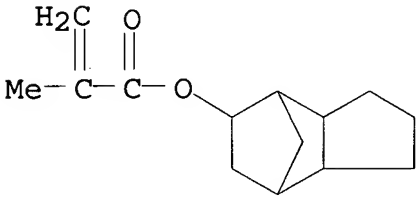
IT **146246-22-2 146246-23-3 146246-25-5**
RL: USES (Uses)
(plastic **lens**, heat- and impact-resistant, with low water absorption and good moldability)

RN 146246-22-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,6-hexanediyl ester, polymer with

(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

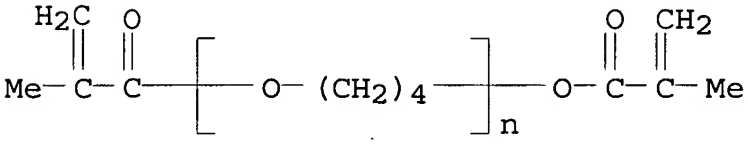
CM 1

CRN 34759-34-7
CMF C14 H20 O2



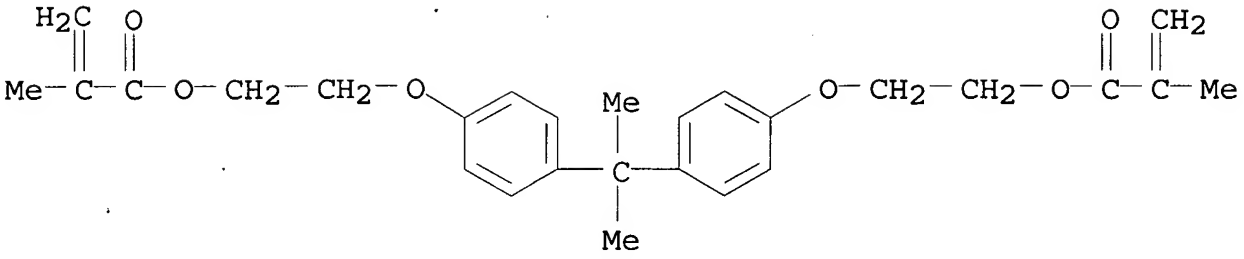
CM 2

CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS



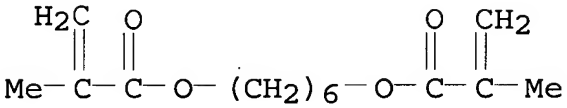
CM 3

CRN 24448-20-2
CMF C27 H32 O6



CM 4

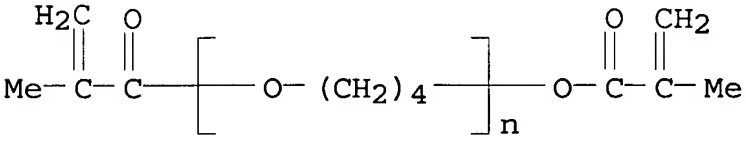
CRN 6606-59-3
CMF C14 H22 O4



RN 146246-23-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester, polymer with cyclohexyl 2-methyl-2-propenoate, 1,6-hexanediyl di-2-propenoate and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl) (9CI) (CA INDEX NAME)

CM 1

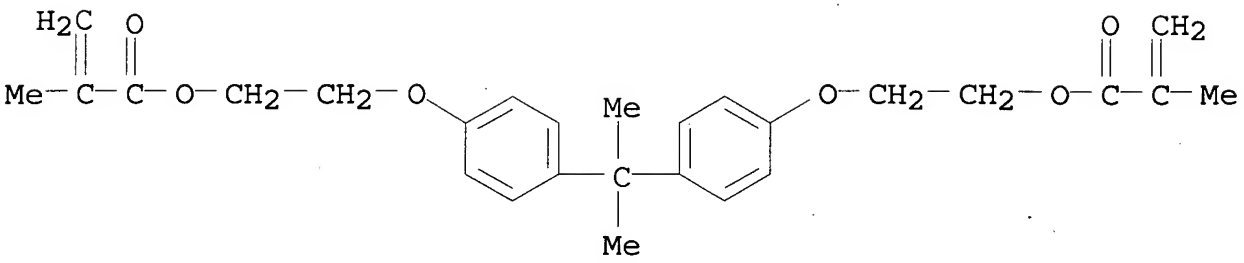
CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS



CM 2

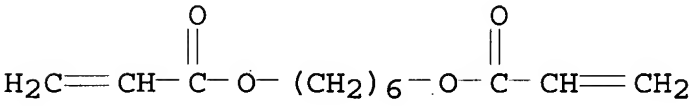
CRN 24448-20-2

CMF C27 H32 O6



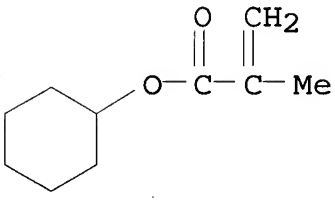
CM 3

CRN 13048-33-4
CMF C12 H18 O4



CM 4

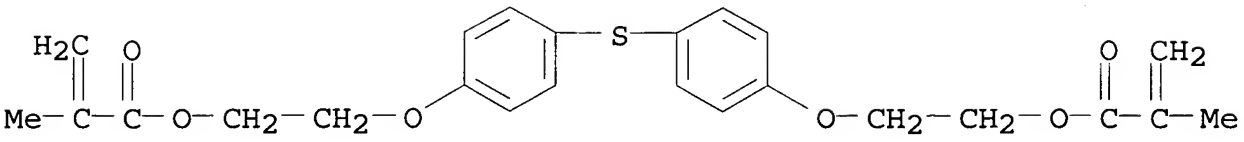
CRN 101-43-9
CMF C10 H16 O2



RN 146246-25-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, thiobis(4,1-phenyleneoxy-2,1-ethanediyl) ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl) and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

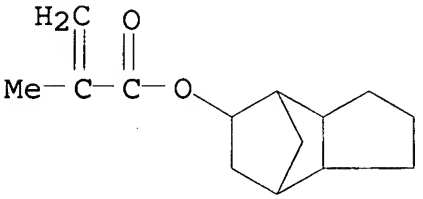
CM 1

CRN 110813-21-3
CMF C24 H26 O6 S



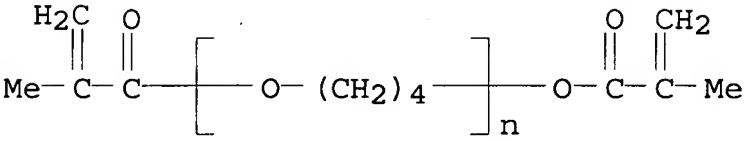
CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS



IC ICM C08F220-30
ICS C08F220-16; C08F220-22; C08F220-38; C08F299-02; G02B001-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35
ST monomer acrylic compn plastic **lens**; impact resistant acrylic plastic **lens**; heat resistant acrylic plastic

lens; water absorption acrylic plastic **lens**; polybutylene glycol dimethacrylate plastic **lens**; polypropylene glycol dimethacrylate plastic **lens**; polyethylene glycol dimethacrylate plastic **lens**

IT **Lenses**
(plastic, acrylic monomer compns. for, heat- and impact-resistant, with low water absorption and good moldability)

IT Polyoxyalkylenes, compounds
RL: USES (Uses)
(acrylate-terminated, reaction products, with acrylic monomers, for heat- and impact-resistant **lenses** with low water absorption and good moldability)

IT **146246-22-2 146246-23-3** 146246-24-4 **146246-25-5** 146246-26-6
RL: USES (Uses)
(plastic **lens**, heat- and impact-resistant, with low water absorption and good moldability)

L39 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1991:633867 Document No. 115:233867 UV-curable resin compositions for transmission screens and cured products. Nakayama, Kenji; Shimura, Katsunori; Yokoshima, Minoru (Nippon Kayaku Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 03157412 A2 19910705 Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-293920 19891114.

AB The antistatic title compns. for **lens** sheets comprise (A) urethane (meth)acrylate and/or epoxy (meth)acrylate, (B) reactive monomer, (C) composite material obtained by dissolving alkali metal salt, alkaline earth metal salt or protic acid in polyethylene glycol, polypropylene glycol or their (meth)acrylate derivative, (D) photoinitiator. Placcel 205 262.6, Placcel 208 407.2, and IPDI 277.9 g were heated at 80° for 13 h, cooled to 60°, treated with 2-hydroxyethyl acrylate 55.3, methoquinone 0.5, dibutyltin dilaurate 0.2 g, and heated at 80° to give a urethane acrylate (I). A reaction product from 1 mol polypropylene glycol (mol. weight 2000) and 2 mol IPDI was treated 2.1 mol 2-hydroxyethyl acrylate, and 100 g of the product was mixed with 25 g LiClO4 under heat to give a composite. A composition from I 30, the above composite 20, N-vinylpyrrolidone 5, dicyclopentanyl acrylate 20, polyethylene glycol diacrylate 25, and Irgacure 184 3 parts was photocured in a mold to give an antistatic Fresnel **lens.**

IT **137113-05-4 137113-06-5**
RL: USES (Uses)
(photocurable, for Fresnel **lenses**, antistatic)

RN 137113-05-4 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1-ethenyl-2-pyrrolidinone, α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 5-isocyanato-1-

(isocyanatomethyl)-1,3,3-trimethylcyclohexane, octahydro-4,7-methano-1H-inden-5-yl 2-propenoate, α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl), α,α'-(oxydi-2,1-ethanediyl)bis[ω-hydroxypoly[oxy(1-oxo-1,6-hexanediyl)]] and Placcel 208 (9CI) (CA INDEX NAME)

CM 1

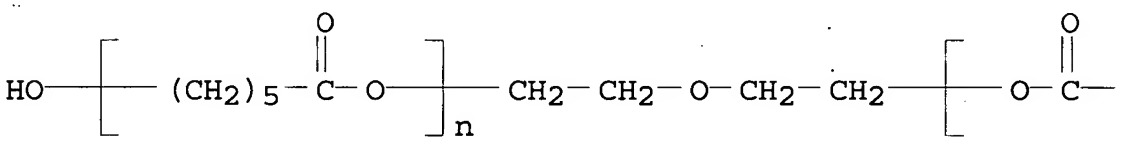
CRN 93793-54-5
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

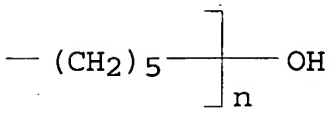
CM 2

CRN 50327-24-7
CMF (C6 H10 O2)n (C6 H10 O2)n C4 H10 O3
CCI PMS

PAGE 1-A

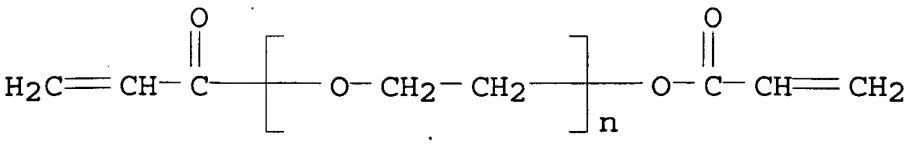


PAGE 1-B



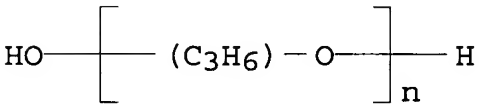
CM 3

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS



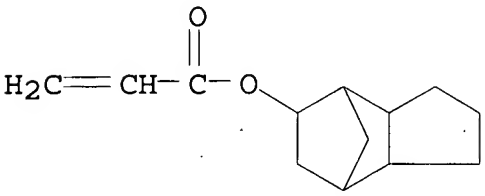
CM 4

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS



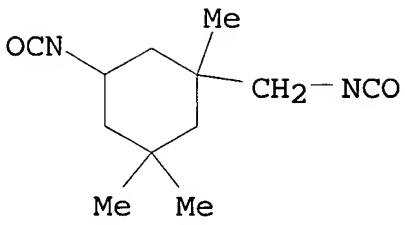
CM 5

CRN 7398-56-3
CMF C13 H18 O2



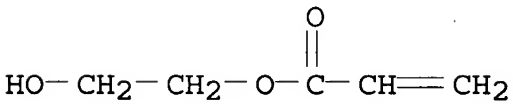
CM 6

CRN 4098-71-9
CMF C12 H18 N2 O2



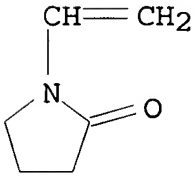
CM 7

CRN 818-61-1
CMF C5 H8 O3



CM 8

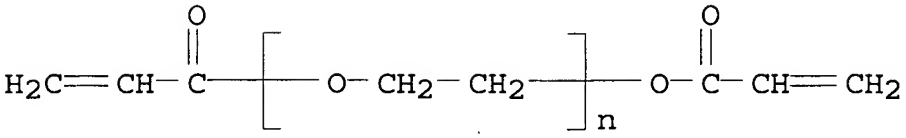
CRN 88-12-0
CMF C6 H9 N O



RN 137113-06-5 HCAPLUS
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1-ethenyl-2-pyrrolidinone, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl), octahydro-4,7-methano-1H-inden-5-yl 2-propenoate and α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

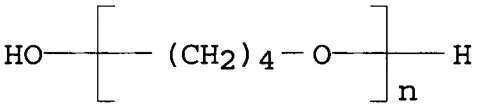
CM 1

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS



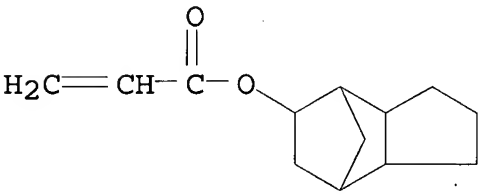
CM 2

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



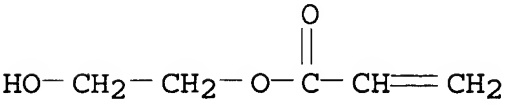
CM 3

CRN 7398-56-3
CMF C13 H18 O2



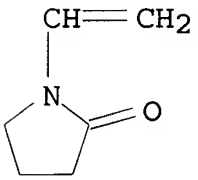
CM 4

CRN 818-61-1
CMF C5 H8 O3



CM 5

CRN 88-12-0
CMF C6 H9 N O



IC ICM C08F299-00
ICS B29D011-00; G03B021-62
CC 37-6 (Plastics Manufacture and Processing)
ST urethane acrylate photocurable Fesnel **lens**; lithium hyperchlorate antistatic urethane acrylate
IT **Lenses**
(Fresnel, photocurable antistatic polyurethane acrylate compns. for)
IT Urethane polymers, preparation
RL: PREP (Preparation)
(polyester-, manufacture of, photocurable, for antistatic Fresnel **lenses**)
IT Alkaline earth compounds
RL: USES (Uses)
(salts, photocured urethane acrylate Fresnel **lenses** containing, antistatic)
IT 79-10-7D, Acrylic acid, tricyclodecanedimethanol esters 7398-56-3 26570-48-9, Polyethylene glycol diacrylate 39378-01-3D, PTMG-IPDI copolymer, reaction products with hydroxyethyl acrylate 55818-57-0 115325-44-5D, reaction products with hydroxyethyl acrylate 135750-77-5 137112-09-5D, reaction products with hydroxyethyl acrylate
RL: USES (Uses)
(photocurable compns. containing, for antistatic Fresnel **lenses**)
IT **137113-05-4 137113-06-5**
RL: USES (Uses)
(photocurable, for Fresnel **lenses**, antistatic)
IT 540-72-7, Sodium thiocyanate 7791-03-9D, reaction products with polyurethanes
RL: USES (Uses)
(photocured urethane acrylate Fresnel **lenses** containing,

antistatic)

L39 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1990:120230 Document No. 112:120230 Urethane (meth)acrylate polymer compositions for plastic **lenses.** Aozai, Fumito; Fukushima, Hiroshi; Hado, Hisako (Mitsubishi Rayon Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01190711 A2 19890731 Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-14288 19880125.

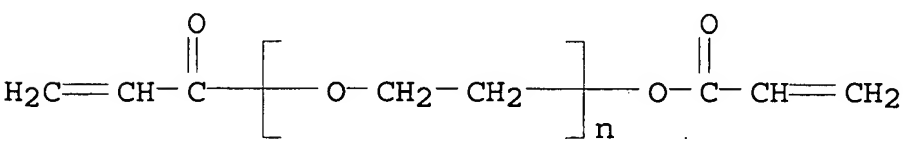
AB Impact-resistant title compns. with good dyeability and yellowing resistance are prepared from reaction products of aliphatic or alicyclic polyisocyanates and OH-containing (meth)acrylates 40-90, monomers H2C:CR1CO2(CH2CHR2O)m(CH2CH2CHR3O)nCOCR1:CH2 (R1-R3 = H, Me; m = 0-23; n = 0-4) 10-60, (meth)acrylate group-containing monomers 0-30, and polymerization initiators 0.01-5 parts. Thus, 302 parts hexamethylene diisocyanate was treated with 544 parts 2-hydroxypropyl methacrylate in the presence of hydroquinone mono-Me ether and dibutyltin dilaurate at 70° for 5 h to give a urethane dimethacrylate which (60 parts) was mixed with 1,3-butylene dimethacrylate 30, tetrahydrofurfuryl methacrylate 10, and 2,4,6-trimethylbenzoyldiphenylphosphine oxide 0.05 part. The mixture was cured in UV light for 30 s and at 110° for 1 h to give a transparent, colorless **lens** with refractive index 1.508, high impact strength, and resistance to yellowing during 200 h at 85°.

IT **125738-34-3**
RL: USES (Uses)
(**lens**, transparent, impact- and yellowing-resistant)

RN 125738-34-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with 1,6-diisocyanatohexane, 2-hydroxypropyl 2-methyl-2-propenoate and α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

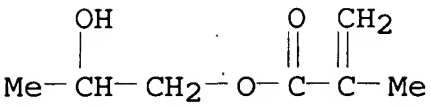
CM 1

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS



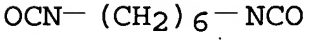
CM 2

CRN 923-26-2
CMF C7 H12 O3



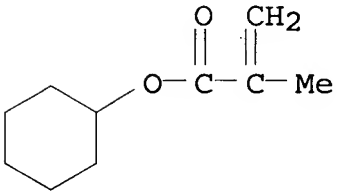
CM 3

CRN 822-06-0
CMF C8 H12 N2 O2



CM 4

CRN 101-43-9
CMF C10 H16 O2



IC ICM C08F299-00
ICS G02B001-04
CC 38-3 (Plastics Fabrication and Uses)
ST urethane acrylate transparency **lens**; impact strength **lens** urethane acrylate; dyeability urethane acrylate transparency; yellowing resistance urethane acrylate; photopolymn urethane acrylate **lens**; polymn photochem urethane acrylate; tetrahydrofurfuryl methacrylate **lens**; butanediol methacrylate **lens**
IT Polymerization catalysts

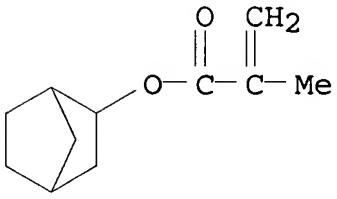
(for urethane acrylate-containing compns., for **lenses**)
IT Transparent materials
(urethane acrylates for, for **lenses**, impact- and yellowing-resistant)
IT **Lenses**
(urethane acrylates for, impact- and yellowing-resistant)
IT Urethane polymers, compounds
RL: USES (Uses)
(acrylates, **lenses**, transparent, impact- and yellowing-resistant)
IT 109-13-7, tert-Butyl peroxyisobutyrate 119-61-9, Benzophenone, uses and miscellaneous 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one 15206-55-0, Methyl phenyl glyoxylate 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for curing of urethane acrylate compns., for **lenses**)
IT 125691-06-7 125691-07-8 125738-33-2 **125738-34-3** 125794-97-0
RL: USES (Uses)
(**lens**, transparent, impact- and yellowing-resistant)

L39 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1988:498880 Document No. 109:98880 Polymers for contact **lenses** and biocompatible bodies. Froix, Michael (USA). Ger. Offen. DE 3727044 A1 19880218, 15 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1987-3727044 19870813. PRIORITY: US 1986-896603 19860813.
AB Polymers, useful for contact **lenses** and biocompatible bodies, which have fixed moisture content, protein rejection, and excellent transparency, based on polymers and/or copolymers crosslinked with 0.1-90% of >1 unsatd. diesters prepared from HOCH2(CF2)mCH2OH (m = 1-10) and/or (HOSiMe2O)x(CH2CH2)yH (X = 1-300; y = 1-400; such that y is >10 times larger than x), are prepared 3-Methacryloyloxypropyl(tris) (trimethylsiloxy)silane 41, Me methacrylate 20, polyethylene glycol methacrylate 20, polyethylene glycol dimethacrylate 350.9, NDurocure 1173 0.1 g were mixed, degassed, and photopolymd. to produce a copolymer having hardness 82, and water content 3.2%. A **lens** prepared from this material had high O permeability and good wettability.
IT **115896-47-4P**
RL: PREP (Preparation)
(manufacture of, for contact **lenses** or biocompatible implants)
RN 115896-47-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, α-(2-methyl-1-oxo-2-propenyl)-ω-

hydroxypoly(oxy-1,2-ethanediyl) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

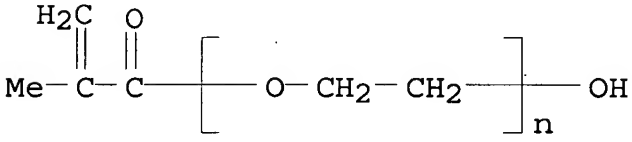
CM 1

CRN 29753-02-4
CMF C11 H16 O2



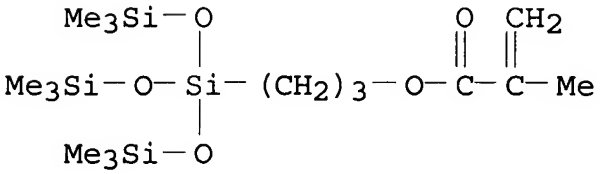
CM 2

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



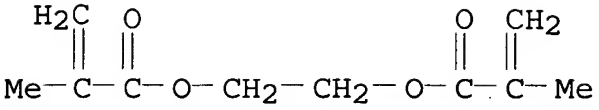
CM 3

CRN 17096-07-0
CMF C16 H38 O5 Si4



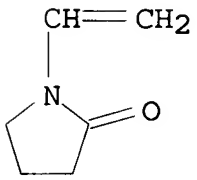
CM 4

CRN 97-90-5
CMF C10 H14 O4



CM 5

CRN 88-12-0
CMF C6 H9 N O



IC ICM C08J003-24
ICS C08K005-54; C08K005-05; C08L053-00; G02B001-04
ICA B29D011-00; A61L017-00; A61L027-00; A61L029-00; A61L031-00
ICI C08J003-24, C08K005-54, C08K005-05; C08J003-24, C08L033-00
CC 63-7 (Pharmaceuticals)
ST contact **lens** hydrophilic protein rejecting; oxygen permeability contact **lens** manuf
IT Siloxanes and Silicones, biological studies
RL: BIOL (Biological study)
(acrylic, manufacture of, for contact **lenses** and implant materials)
IT Polyesters, biological studies
(acrylic-, manufacture of, for contact **lenses** and implant materials)
IT **Lenses**
(contact, manufacture of, biocompatible polymers for)
IT Polymerization
(photochem., contact **lens** and biocompatible material manufacture by)
IT Acrylic polymers, biological studies
RL: BIOL (Biological study)
(polyester-, manufacture of, for contact **lenses** and implant

materials)

IT Acrylic polymers, biological studies
RL: BIOL (Biological study)
(siloxane-, manufacture of, for contact **lenses** and implant materials)

IT 26374-18-5P 30944-41-3P 58503-81-4P 62083-88-9P 72642-88-7P
94772-40-4P 115863-46-2P 115863-48-4P 115863-49-5P
115863-50-8P 115863-51-9P 115863-52-0P 115863-53-1P
115863-54-2P 115863-55-3P 115863-56-4P 115863-59-7P
115863-60-0P 115863-61-1P 115863-62-2P 115863-66-6P
115863-67-7P 115863-68-8P 115863-69-9P 115863-70-2P
115863-71-3P 115863-72-4P **115896-47-4P** 115896-48-5P
115896-49-6P 115934-20-8P 116004-46-7P 116004-47-8P
116004-48-9P 116050-02-3P
RL: PREP (Preparation)
(manufacture of, for contact **lenses** or biocompatible implants)

L39 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
1987:583614 Document No. 107:183614 Manufacture of polymers for contact **lenses.** Mizutani, Yutaka; Tanahashi, Naokatsu; Harada, Tatsuo (Nippon Contact Lens Mfg. Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61285425 A2 19861216 Showa, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-126236 19850612.

AB Materials for the manufacture of contact **lenses** are prepared by copolymg. organosiloxanes, perfluoroalkyl ethers, and vinylcarboxylates (and/or fluoroalkyl alc. vinylcarboxylic acid esters). These materials are wettable, permeable to O, and the **lenses** prepared from them are worn for an extended period. Thus, a contact **lens** material was prepared by polymerizing methacryloxyethoxypropylpentamethyldisiloxane 55, F3COCF(CF2)O(C3F6O)13CF2CH2O2CCH:CH2 5, Me methacrylate 27, ethylene glycol dimethacrylate 5, and methacrylic acid 8 parts by weight in the presence of 0.01 part 2,2'-azobis(2,4-dimethylvaleronitrile).

IT **109635-08-7P**
RL: PREP (Preparation)
(manufacture of, as contact **lens** materials)

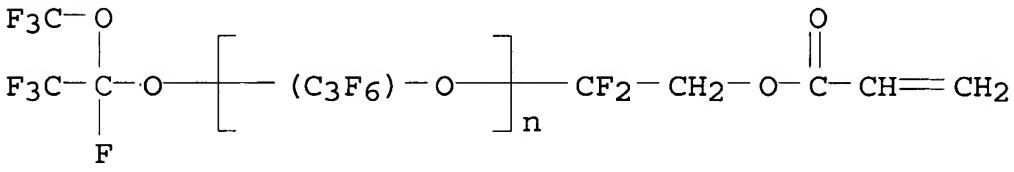
RN 109635-08-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with cyclohexyl 2-methyl-2-propenoate, α-[1,1-difluoro-2-[(1-oxo-2-propenyl)oxy]ethyl]-ω-[1,2,2,2-tetrafluoro-1-(trifluoromethoxy)ethoxy]poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], 1,2-ethanediyl bis(2-methyl-2-propenoate), 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), 1-ethenyl-2-pyrrolidinone, methyl 2-methyl-2-propenoate, (1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(3,1-propanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and 2-[3-[3,3,3-trimethyl-1,1-

bis[(trimethylsilyl)oxy]disiloxanyl]propoxy]ethyl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

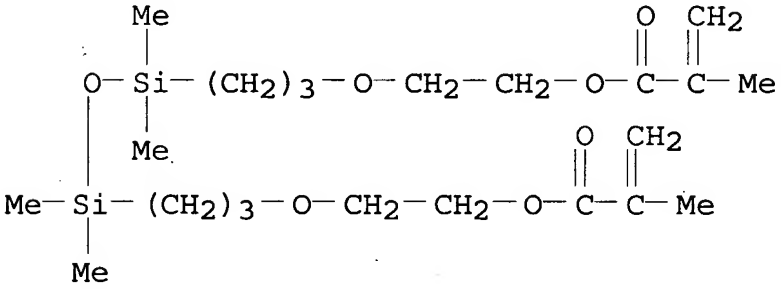
CM 1

CRN 109635-03-2
CMF (C3 F6 O)n C8 H5 F9 O4
CCI IDS, PMS



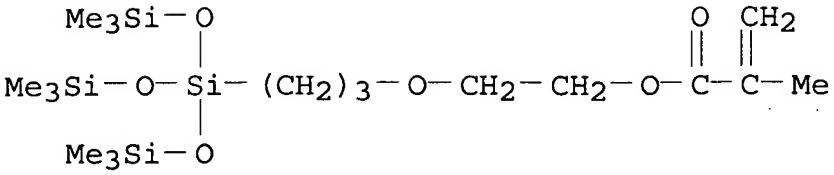
CM 2

CRN 109456-20-4
CMF C22 H42 O7 Si2



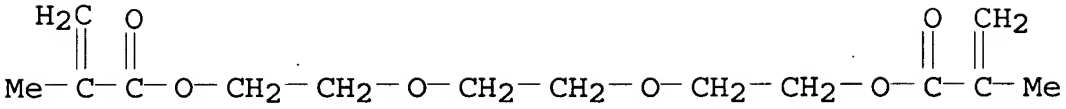
CM 3

CRN 104512-64-3
CMF C18 H42 O6 Si4



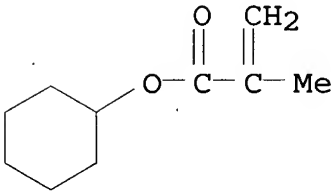
CM 4

CRN 109-16-0
CMF C14 H22 O6



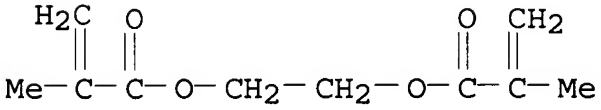
CM 5

CRN 101-43-9
CMF C10 H16 O2



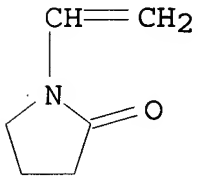
CM 6

CRN 97-90-5
CMF C10 H14 O4



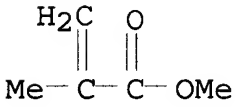
CM 7

CRN 88-12-0
CMF C6 H9 N O



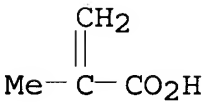
CM 8

CRN 80-62-6
CMF C5 H8 O2



CM 9

CRN 79-41-4
CMF C4 H6 O2



IC ICM G02C007-04
ICA C08F220-20; C08F220-28; C08F230-08
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 37
ST polymer manuf contact **lens**
IT Fluoropolymers
RL: BIOL (Biological study)
(polymers with acrylates, manufacture of, as contact **lens** materials)

IT Siloxanes and Silicones, compounds
RL: BIOL (Biological study)
(polymers with acrylic acid derivs., as contact **lens** materials)
IT **Lenses**
(contact, copolymers for, manufacture of)
IT Polyoxyalkylenes, compounds
RL: PROC (Process)
(perfluoro, acrylate-terminated, polymers, with acrylates, manufacture
of, as contact **lens** materials)
IT Fluoropolymers
RL: PROC (Process)
(polyoxyalkylene-, acrylate-terminated, polymers, with acrylates, manufacture of, as contact **lens** materials)
IT 79-41-4DP, polymers with acrylates and perfluoropolyoxyalkylenes
80-62-6DP, polymers with acrylates and perfluoropolyoxyalkylenes
88-12-0DP, polymers with acrylates and perfluoropolyoxyalkylenes
96-33-3DP, polymers with acrylates and perfluoropolyoxyalkylenes
97-63-2DP, polymers with acrylates and perfluoropolyoxyalkylenes
97-90-5DP, polymers with acrylates and perfluoropolyoxyalkylenes
101-43-9DP, polymers with acrylates and perfluoropolyoxyalkylenes
109-16-0DP, polymers with acrylates and perfluoropolyoxyalkylenes
109-17-1DP, polymers with acrylates and perfluoropolyoxyalkylenes
352-87-4DP, polymers with acrylates and perfluoropolyoxyalkylenes
617-52-7DP, polymers with acrylates and perfluoropolyoxyalkylenes
868-77-9DP, polymers with acrylates and perfluoropolyoxyalkylenes
923-26-2DP, polymers with acrylates and perfluoropolyoxyalkylenes
1680-21-3DP, polymers with acrylates and perfluoropolyoxyalkylenes
2210-28-8DP, polymers with acrylates and perfluoropolyoxyalkylenes
2998-23-4DP, polymers with acrylates and perfluoropolyoxyalkylenes
3066-71-5DP, polymers with acrylates and perfluoropolyoxyalkylenes
3290-92-4DP, polymers with acrylates and perfluoropolyoxyalkylenes
26248-95-3DP, polymers with acrylates and perfluoropolyoxyalkylenes
84461-14-3DP, polymers with acrylates and perfluoropolyoxyalkylenes
104512-64-3DP, polymers with acrylates and perfluoropolyoxyalkylenes
104534-96-5DP, polymers with acrylates and perfluoropolyoxyalkylenes
109455-83-6DP, polymers with acrylates and perfluoropolyoxyalkylenes
109456-20-4DP, polymers with acrylates and perfluoropolyoxyalkylenes
109620-87-3P 109634-67-5DP, polymers with acrylates and perfluoropolyoxyalkylenes 109635-03-2DP, polymers with acrylates and perfluoropolyoxyalkylenes 109635-04-3P 109635-05-4P
109635-06-5P 109635-07-6P **109635-08-7P** 109784-14-7P
RL: PREP (Preparation)
(manufacture of, as contact **lens** materials)

L39 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

1987:162619 Document No. 106:162619 Preparation of contact **lens** with high capacity for water absorption. Izumitani, Tetsuo; Tarumi, Jiro; Komya, Shigeo; Sawamoto, Takeyuki (Hoya Corp., Japan). Jpn. Kokai Tokkyo Koho JP 61226728 A2 19861008 Showa, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-65015 19850330.

AB A contact **lens** containing >60% H2O is prepared from (1) N,N-dimethylacrylamide 40-90, (2) ≥1 hydrophobic monomer selected from the group comprising Ph acrylates, benzyl acrylates, alkyl acrylates, etc., 5-50, (3) an unsatd. carboxylic acid 0.1-10.0, and (4) ≥1 crosslinking agent selected from the group comprising polyethylene glycol diacrylate, polypropylene glycol diacrylate, etc., 0.01-5.0% by weight The **lens** is transparent and has a strong mech. strength. Thus, N,N-dimethylacrylamide 68, cyclohexyl methacrylate 30, triethylene glycol dimethacrylate 0.2, acrylic acid 2, and azobisisobutyronitrile 0.05 parts by weight were mixed, poured into a mold, sealed, and heated from 50° to 120° in 24 h to give a copolymer. The product was made into a contact **lens** . This **lens** absorbed H2O when soaked in saline and the H2O content was 76%, the O permeation coefficient 50 + 10-11 mL.cm/cm2.s.mm Hg at 30°, and the tensile strength 343 g/mm2.

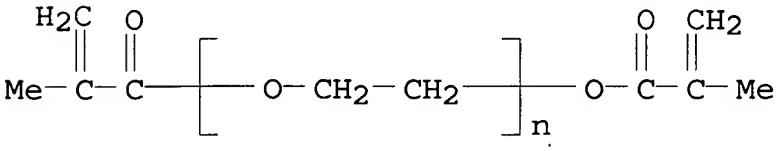
IT **107678-91-1 107724-77-6**
RL: DEV (Device component use); USES (Uses)
(for contact **lens**)

RN 107678-91-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with N,N-dimethyl-2-propenamide, α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

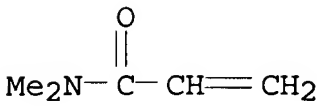
CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 2

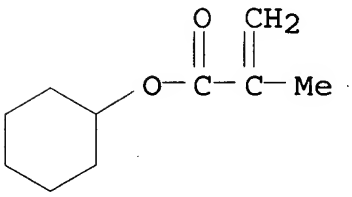
CRN 2680-03-7

CMF C5 H9 N O



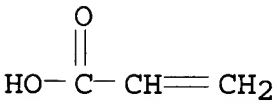
CM 3

CRN 101-43-9
CMF C10 H16 O2



CM 4

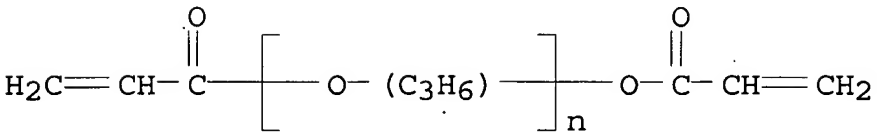
CRN 79-10-7
CMF C3 H4 O2



RN 107724-77-6 HCAPLUS
CN Butanedioic acid, methylene-, polymer with cyclohexyl 2-methyl-2-propenoate, N,N-dimethyl-2-propenamide and α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

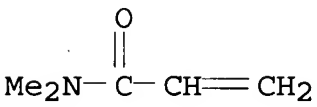
CM 1

CRN 52496-08-9
CMF (C3 H6 O)n C6 H6 O3
CCI IDS, PMS



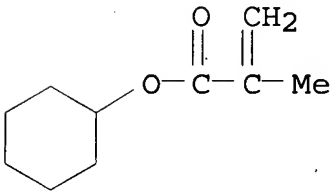
CM 2

CRN 2680-03-7
CMF C5 H9 N O



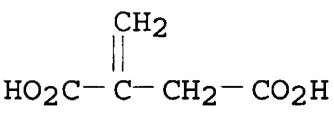
CM 3

CRN 101-43-9
CMF C10 H16 O2



CM 4

CRN 97-65-4
CMF C5 H6 O4



IC ICM G02C007-04

ICS G02B001-04
ICA C08F220-12; C08F220-56
CC 63-7 (Pharmaceuticals)
ST contact **lens** acrylic polymer
IT Acrylic polymers, biological studies
RL: DEV (Device component use); USES (Uses)
(for contact **lens**)
IT **Lenses**
(contact, acrylic copolymers for)
IT 107678-88-6 107678-89-7 107678-90-0 **107678-91-1**
107679-07-2 107679-08-3 107679-12-9 **107724-77-6**
107795-41-5 107795-42-6 107795-43-7
RL: DEV (Device component use); USES (Uses)
(for contact **lens**)

=> d l40 ti 1-31

L40 ANSWER 1 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Radiation-curable resin compositions and **optical** articles therefrom

L40 ANSWER 2 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Patternable photocurable polymer compositions with good heat resistance and storage stability, transparent films and spacers therefrom, and displays therewith

L40 ANSWER 3 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Colored resin compositions with good transmittance and low voltage reduction effect for color filters and liquid crystal displays

L40 ANSWER 4 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI **Optical** memory devices showing noise-reduced readout signals and waveguides therefor

L40 ANSWER 5 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Heat-resistant curable resin compositions with high transparency and their uses for displays

L40 ANSWER 6 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Curable compositions with good hardness and low cure shrinkage and cure-treated articles

L40 ANSWER 7 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Coloring resin composition, color filter, and liquid-crystal display

L40 ANSWER 8 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN

TI Actinic energy-curable compositions and **optical** disks using them

L40 ANSWER 9 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Ultraviolet-curable resin composition for **optical** disk and the disk

L40 ANSWER 10 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI **Optical** waveguide device, its production method and **optical** memory device

L40 ANSWER 11 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI UV-curable resin composition for **optical** disk anticorrosion coating

L40 ANSWER 12 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Radiation-curable compositions with low viscosity and **optical** disks having cured layers of them

L40 ANSWER 13 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI **Optical** memory element with **optical** waveguide device

L40 ANSWER 14 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Anticorrosive UV-curable resin compositions and **optical** disks therefrom

L40 ANSWER 15 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI UV curable resin compositions with good adhesion and anticorrosion to silver or silver alloy thin films and **optical** disks therewith

L40 ANSWER 16 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI **Optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics

L40 ANSWER 17 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI UV-curable coatings with good adhesion to amorphous polyolefins and **optical** disks coated therewith

L40 ANSWER 18 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI UV-curable compositions and **optical** disks therefrom

L40 ANSWER 19 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Manufacture of **optical** polymers and **optical** parts using them

L40 ANSWER 20 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Photocurable adhesives containing 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one for lamination of **optical** disks

L40 ANSWER 21 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Epoxy diacrylate-based protective coating compositions and **optical** disks using them

L40 ANSWER 22 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Heat-resistant photocurable resin compositions, **optical** moldings using them, and their manufacture

L40 ANSWER 23 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Radiation-curable resin compositions for **optical** three-dimensional modeling

L40 ANSWER 24 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Transparent photocurable polymer compositions and their cured products for **optical** materials

L40 ANSWER 25 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Coating compositions for protection of **optical** devices

L40 ANSWER 26 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Antistatic antidust UV-curable acrylic resin coatings and **optical** disks therefrom

L40 ANSWER 27 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Polyoxyalkylene acrylate compositions for **optical** disk materials and abrasion-resistant coatings and their cured products

L40 ANSWER 28 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Erasable **optical** recording medium containing adamantyl monomethacrylate

L40 ANSWER 29 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Photopolymerized acrylic polymer **optical** disks

L40 ANSWER 30 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI UV-curable acrylic resin compositions for **optical** disks

L40 ANSWER 31 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
TI Resin compositions and coatings

=> fil stng
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L40 ANSWER 1 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
2006:1095275 Document No. 145:420348 Radiation-curable resin compositions and **optical** articles therefrom. Kawashima, Yasunari; Tokuda, Hiroyuki (Dainippon Ink and Chemicals, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 2006282728 A2 20061019, 19pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2005-101487 20050331.
AB The compns. with good adhesion to plastic substrates comprise epoxy resin ethylenically unsatd. monobasic acid esters showing Gardner color number of a 50% nonvolatile MEK solution ≤7, prepared by reaction of (a1) epoxy resins having glycidyloxy group-substituted aromatic hydrocarbon groups bonded via alicyclic hydrocarbon groups with (a2) ethylenically unsatd. monobasic acids. Thus, 573 g phenol

was polymerized with 115 g dicyclopentadiene in the presence of BF3-phenol complex and Zn to give 250 g phenolic resin, 100 g of which was treated with 272 g epichlorohydrin in BuOH in the presence of NaOH to give 126 g epoxy resin (I). Then, 100 g I was treated with 27.7 g acrylic acid in the presence of hydroquinone and PPh3 to give an epoxy resin acrylate (Gardner color number of 50% MEK solution 1-2), 55 parts of which was mixed with phenoxyethyl acrylate 11, tripropylene glycol diacrylate 24, tris(acryloyloxyethyl) isocyanurate 10, and 1-hydroxycyclohexyl Ph ketone 3 parts and irradiated with UV between a polypropylene film and a metal sheet to give an **optical** film showing refractive index 1.552, Abbe number 41, yellowness index <5, and transmittance ≥90%.

IT **912469-58-0P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-curable epoxy resin acrylate compns. with good yellowing resistance for **optical** articles)

RN 912469-58-0 HCAPLUS

CN 2-Propenoic acid, (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl ester, polymer with (chloromethyl)oxirane polymer with phenol and 3a,4,7,7a-tetrahydro-4,7-methano-1H-indene 2-propenoate, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] di-2-propenoate, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) di-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-propenoate and 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

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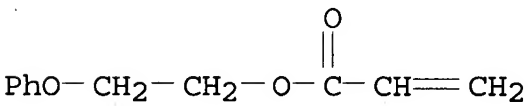
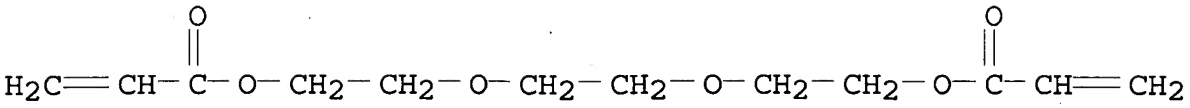
CRN 48145-04-6
CMF C11 H12 O3



CM 2

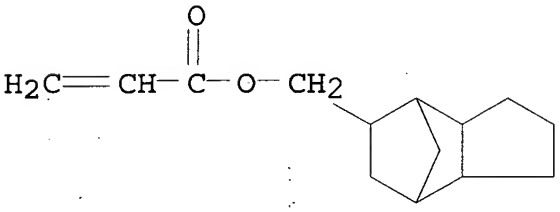
CRN 42978-66-5
CMF C15 H24 O6
CCI IDS

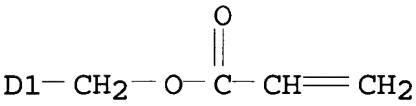


3 (D1—Me)

CM 3

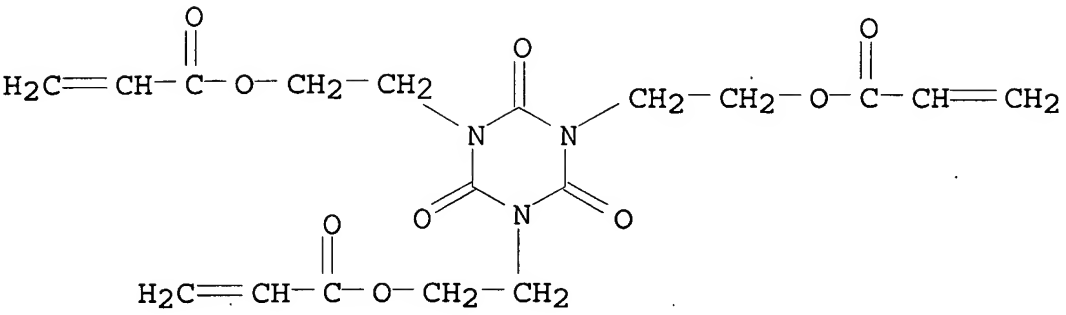
CRN 42594-17-2
CMF C18 H24 O4
CCI IDS





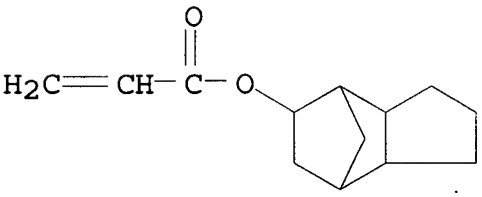
CM 4

CRN 40220-08-4
CMF C18 H21 N3 O9



CM 5

CRN 7398-56-3
CMF C13 H18 O2

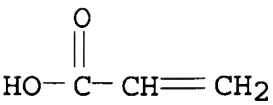


CM 6

CRN 804553-58-0
CMF (C10 H12 . C6 H6 O . C3 H5 Cl O)x . x C3 H4 O2

CM 7

CRN 79-10-7
CMF C3 H4 O2

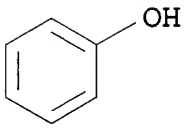


CM 8

CRN 30420-32-7
CMF (C10 H12 . C6 H6 O . C3 H5 Cl O)x
CCI PMS

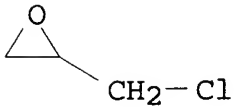
CM 9

CRN 108-95-2
CMF C6 H6 O



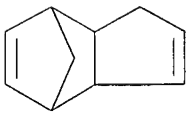
CM 10

CRN 106-89-8
CMF C3 H5 Cl O



CM 11

CRN 77-73-6
CMF C10 H12



CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73
ST dicyclopentadiene phenolic epoxy resin acrylate **optical** film; yellowing resistance dicyclopentadiene phenolic epoxy resin acrylate
IT Phenolic resins, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-epoxy; radiation-curable epoxy resin acrylate compns. with good yellowing resistance for **optical** articles)

IT Epoxy resins, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-phenolic; radiation-curable epoxy resin acrylate compns. with good yellowing resistance for **optical** articles)

IT Acrylic polymers, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(laminate; radiation-curable epoxy resin acrylate compns. with good yellowing resistance for **optical** articles)

IT **Optical** equipment
Optical films
(radiation-curable epoxy resin acrylate compns. with good yellowing resistance for **optical** articles)

IT Laminated plastics, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(radiation-curable epoxy resin acrylate compns. with good yellowing resistance for **optical** articles)

IT 7440-66-6, Zinc, uses 144746-93-0, K 2411
RL: CAT (Catalyst use); USES (Uses)
(in manufacture of dicyclopentadiene-phenol copolymer; radiation-curable epoxy resin acrylate compns. with good yellowing resistance for **optical** articles)

IT 912469-54-6P, Dicyclopentadiene-epichlorohydrin-phenol copolymer acrylate-phenoxyethyl acrylate-tripropylene glycol diacrylate-tris(acryloyloxyethyl) isocyanurate copolymer 912469-57-9P **912469-58-0P** 912469-60-4P 912469-61-5P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-curable epoxy resin acrylate compns. with good yellowing resistance for **optical** articles)

L40 ANSWER 10 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
2004:569165 Document No. 141:113865 **Optical** waveguide device, its production method and **optical** memory device.
Ishihara, Hiroshi (Mitsubishi Chemical Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2004199015 A2 20040715, 21 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2003-28115 20030205. PRIORITY: JP 2002-311383 20021025.

AB The invention relates to an **optical** waveguide device, suited for use in making an **optical** memory device, comprising a core layer made of a photocurable resin, and cladding

layer laminated on both sides of the core layer, wherein the reduction of the core layer is ≤30 %, after the **optical** waveguide is maintained in 80 °C and 85 %RH for 500 h.

IT **615283-15-3**, Dicyclopentadienyl diacrylate-1,6-hexanediol diacrylate-Kayarad R 712-trimethylolpropane triacrylate copolymer
RL: DEV (Device component use); USES (Uses)
(**optical** waveguide device and **optical** memory device)

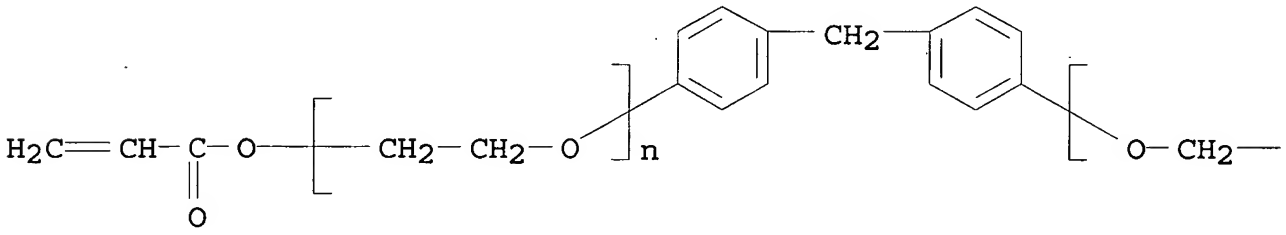
RN 615283-15-3 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 1,6-hexanediyl di-2-propenoate, α,α'-(methylenedi-4,1-phenylene)bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and octahydro-4,7-methano-1H-indene-5,?-diyl di-2-propenoate (9CI) (CA INDEX NAME)

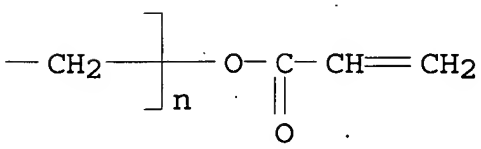
CM 1

CRN 120750-67-6
CMF (C2 H4 O)n (C2 H4 O)n C19 H16 O4
CCI PMS

PAGE 1-A

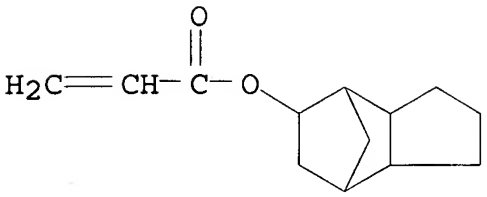


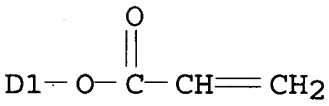
PAGE 1-B



CM 2

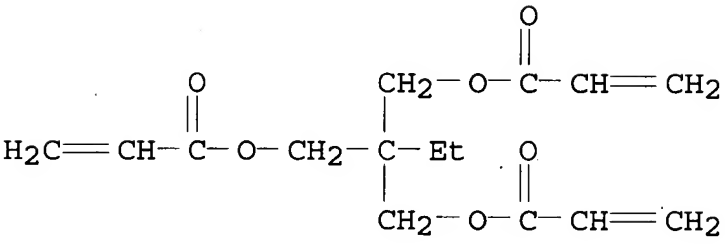
CRN 91433-85-1
CMF C16 H20 O4
CCI IDS





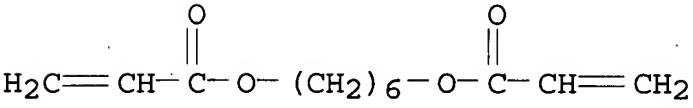
CM 3

CRN 15625-89-5
CMF C15 H20 O6



CM 4

CRN 13048-33-4
CMF C12 H18 O4



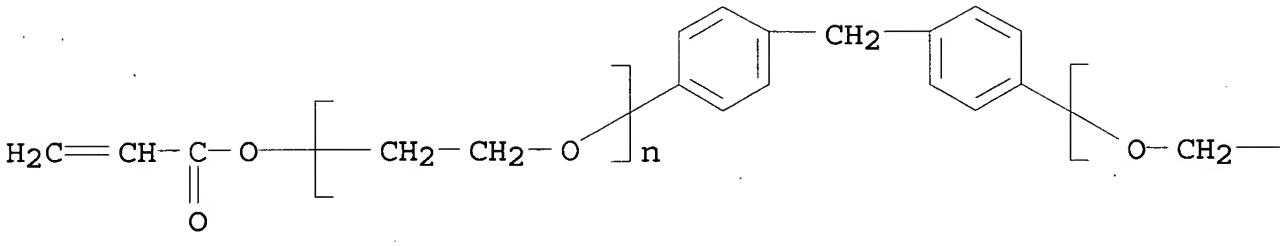
IC ICM G02B006-122
ICS G02B006-13; G11C013-04
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 74
ST **optical** waveguide device **optical** memory
IT **Optical** memory devices
Optical waveguides
(**optical** waveguide device and **optical** memory device)
IT Acrylic polymers, uses
RL: DEV (Device component use); USES (Uses)
(**optical** waveguide device and **optical** memory device)
IT **615283-15-3**, Dicyclopentadienyl diacrylate-1,6-hexanediol diacrylate-Kayarad R 712-trimethylolpropane triacrylate copolymer
RL: DEV (Device component use); USES (Uses)
(**optical** waveguide device and **optical** memory device)

L40 ANSWER 13 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
2003:834299 Document No. 139:330381 **Optical** memory element with **optical** waveguide device. Ishihara, Hiroshi; Ezaki, Satoshi (Mitsubishi Chemical Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2003303449 A2 20031024, 21 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-104153 20020405.
AB The invention relates to an **optical** memory element comprising at least a core layer both sides laminated with a clad layer, wherein the interface (i.e. a recording layer) between the core layer and the clad layer has a grooved pattern and the element shows a flexural rigidity of ≤0.294 N·m2. The core and clad layers are made up of UV-curable resins.
IT **615283-15-3**, Dicyclopentadienyl diacrylate-1,6-hexanediol diacrylate-Kayarad R 712-trimethylolpropane triacrylate copolymer
RL: DEV (Device component use); USES (Uses)
(core layer of **optical** memory element with **optical** waveguide device)
RN 615283-15-3 HCAPLUS
CN 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 1,6-hexanediyl di-2-propenoate, α,α'-(methylenedi-4,1-phenylene)bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and octahydro-4,7-methano-1H-indene-5,?-diyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 120750-67-6
CMF (C2 H4 O)n (C2 H4 O)n C19 H16 O4
CCI PMS

PAGE 1-A



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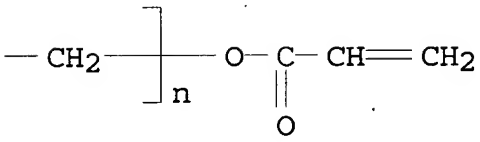
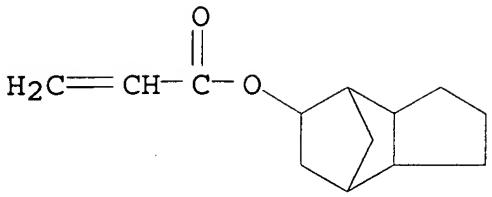
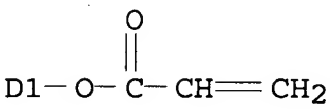


CM 2

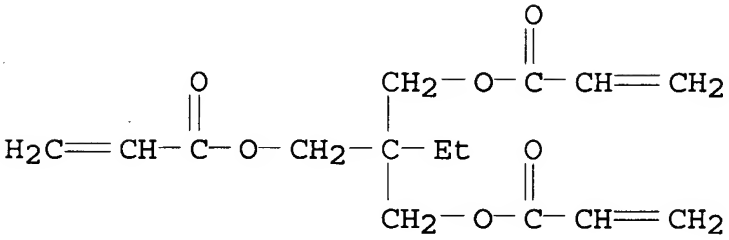
CRN 91433-85-1
CMF C16 H20 O4
CCI IDS





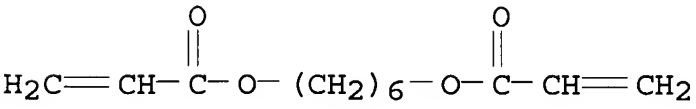
CM 3

CRN 15625-89-5
CMF C15 H20 O6



CM 4

CRN 13048-33-4
CMF C12 H18 O4



IC ICM G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73

ST **optical** memory waveguide core clad UV curable resin

IT Polyurethanes, uses
RL: DEV (Device component use); USES (Uses)
(acrylates; clad layer of **optical** memory element with **optical** waveguide device)

IT **Optical** memory devices
Optical waveguides
(**optical** memory element with **optical** waveguide device)

IT 13048-33-4D, 1,6-Hexanediol diacrylate, polymers with urethane acrylates and trimethylolpropane triacrylate 15625-89-5D, Trimethylolpropane triacrylate, polymers with urethane acrylates and 1,6-hexanediol diacrylate
RL: DEV (Device component use); USES (Uses)
(clad layer of **optical** memory element with **optical** waveguide device)

IT **615283-15-3**, Dicyclopentadienyl diacrylate-1,6-hexanediol diacrylate-Kayarad R 712-trimethylolpropane triacrylate copolymer
RL: DEV (Device component use); USES (Uses)
(core layer of **optical** memory element with **optical** waveguide device)

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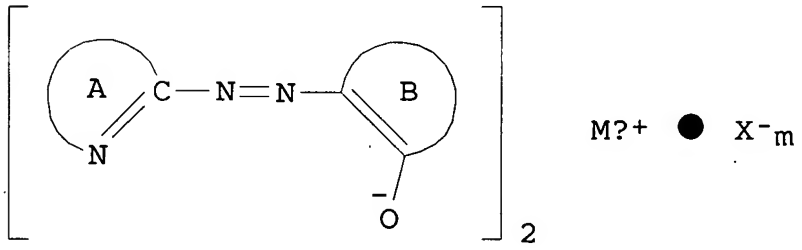
2003:628364 Document No. 139:171328 **Optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics. Imamura, Satoru; Kojima, Takashi (Mitsubishi Chemical Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2003228983 A2 20030815, 19 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-23134 20020131.

GI



I

AB The memory device comprises (A) a waveguide having a resin core layer and resin clad layers on its both sides and (B) a recording

layer contacting to the core or clad layers, wherein the solubility of the recording layer in coating materials for preparing the core or the clad layers is ≤0.25%. The recording layers contain azo compound metal salts I (ring A = aromatic hetero ring; ring B = aromatic hydrocarbon ring, hetero ring, etc.; M = metal ion with valence ≥2; n = valence of M; X- = counter anion; m = number of X-; m = n - 2).

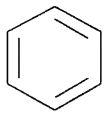
IT **574737-18-1P**, Dicyclopentadienyl diacrylate-ethoxylated bisphenol F diacrylate-1,6-hexanediol diacrylate-trimethylolpropane triacrylate copolymer
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(waveguide core; **optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics)

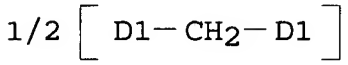
RN 574737-18-1 HCAPLUS

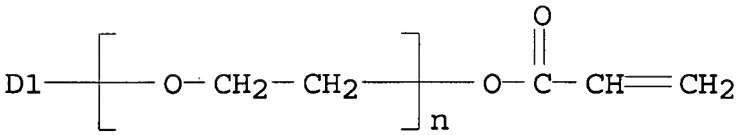
CN 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 1,6-hexanediyl di-2-propenoate, α,α'-(methylenediphenylene)bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and octahydro-4,7-methano-1H-indene-5,?-diyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 105809-30-1
CMF (C2 H4 O)n (C2 H4 O)n C19 H16 O4
CCI IDS, PMS

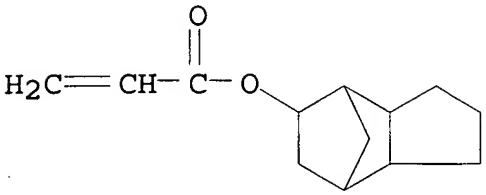


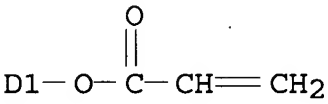




CM 2

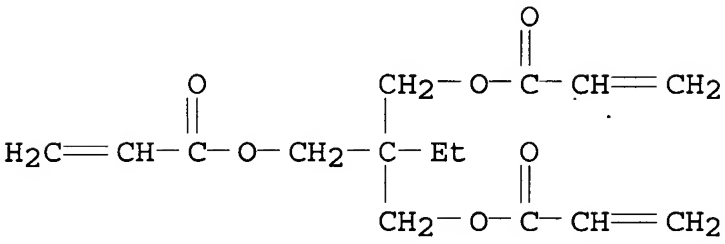
CRN 91433-85-1
CMF C16 H20 O4
CCI IDS





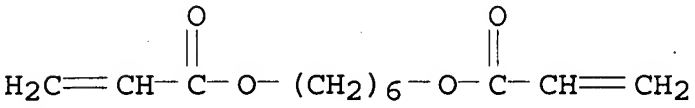
CM 3

CRN 15625-89-5
CMF C15 H20 O6



CM 4

CRN 13048-33-4
CMF C12 H18 O4



IC ICM G11C013-04
ICS B41M005-26; G02B006-122; G11B007-24; G11C017-00; C09B045-00
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **optical** memory device plastic waveguide; azo dye
optical recording plastic waveguide
IT Polyurethanes, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(acrylic, waveguide clad; **optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics)
IT Polyoxyalkylenes, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(acrylic, waveguide core; **optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics)
IT **Optical** memory devices
Optical waveguides
(**optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics)
IT Azo dyes
(recording layer containing; **optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics)
IT 143319-47-5 575465-55-3
RL: DEV (Device component use); USES (Uses)
(azo dye, recording layer containing; **optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics)
IT 13048-33-4DP, 1,6-Hexanediol diacrylate, polymers with urethane acrylates 15625-89-5DP, Trimethylolpropane triacrylate, polymers with urethane acrylates
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(waveguide clad; **optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics)
IT **574737-18-1P**, Dicyclopentadienyl diacrylate-ethoxylated bisphenol F diacrylate-1,6-hexanediol diacrylate-trimethylolpropane triacrylate copolymer
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(waveguide core; **optical** memory devices having plastic waveguides with no dispersion of recording dyes into plastics)

L40 ANSWER 19 OF 31 HCAPLUS COPYRIGHT 2006 ACS on STN
2000:674115 Document No. 133:253609 Manufacture of **optical** polymers and **optical** parts using them. Yoshida, Akihiro; Ushikubo, Keiko; Yamashita, Yukihiko (Hitachi Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000264929 A2 20000926, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-71507 19990317.

AB The polymers are manufactured by polymerizing (A) Me methacrylate (I) 5-95, (B) (meth)acrylic acid esters with C5-22-alicyclic hydrocarbons 5-95, and (C) crosslinkable monomers 0.001-0.2 part (A + B + C = 100). Thus, I, tricyclo[5.2.1.02,6]decan-8-yl methacrylate, and ethylene glycol dimethacrylate were polymerized in the presence of octyl mercaptan in a mold to give a test piece, showing bending strength at break 736 kg/cm2, orientation birefringence -9.2 + 10-5, Tg 113°, and saturated water absorption 1.2%.

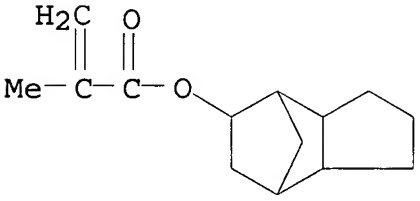
IT **221324-14-7P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of acrylic polymers for **optical** parts)

RN 221324-14-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with methyl 2-methyl-2-propenoate and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

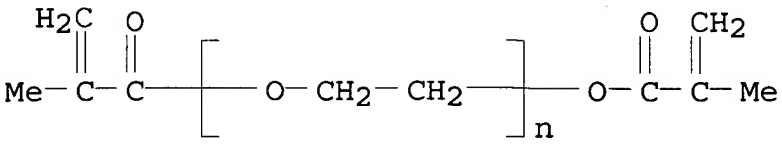
CM 1

CRN 34759-34-7
CMF C14 H20 O2



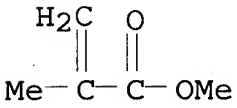
CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 3

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08F220-14
ICS C08F002-38; C08F220-18; C08F222-40; G02B001-04; C08F220-14; C08F220-10; C08F220-20
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73
ST tricyclodecanyl methacrylate polymer oxyethylene crosslink **optical**; moisture resistance acrylic polymer **optical** part; bending strength methyl methacrylate polymer **optical**
IT Crosslinking agents
Optical materials
Water-resistant materials
(manufacture of acrylic polymers for **optical** parts)
IT 1985-51-9, Neopentyl glycol dimethacrylate
RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(crosslinking agent; manufacture of acrylic polymers for **optical** parts)
IT **221324-14-7P** 296280-41-6P 296280-43-8P 296280-45-0P 296280-47-2P 296280-49-4P 296280-51-8P 296280-54-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of acrylic polymers for **optical** parts)

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